

# INDUSTRIAL PLANNING: WHY AND HOW

By

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"INDUSTRIAL ENTERPRISE IN INDIA,"

"BANKING AND INDUSTRIAL FINANCE IN INDIA."

WITH A FOREWORD

BY

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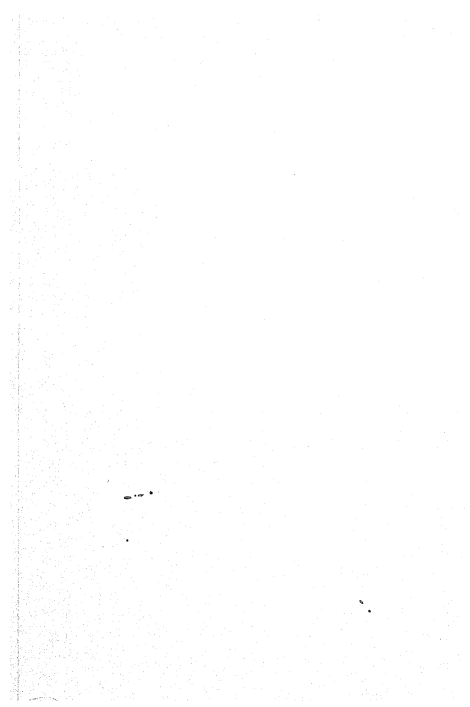
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To  
P. R. GUHA  
In Friendship

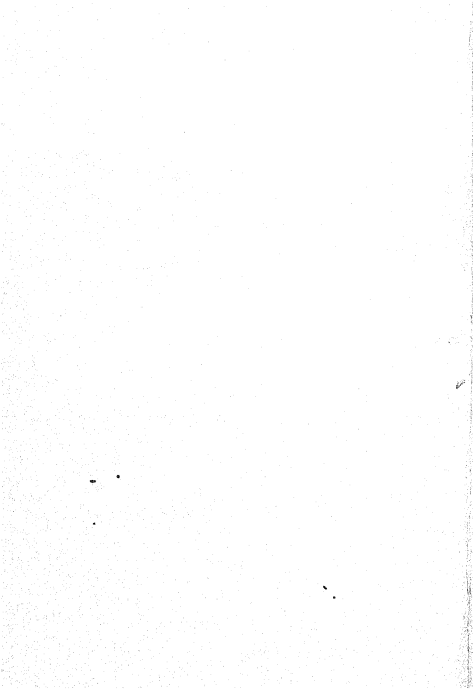


## PREFACE

This is an introductory book for the general reader and the author does not presume to offer any "plan" for industrial re-organisation in India. Instead, his aim has been to tell the average man in the street what industrial planning means and what specific suggestions he may reasonably expect to find in the "plan" or "plans" which will be suggested by the National Planning Committee or the various Provincial Industrial Survey Committees now at work. At the same time, the main problems facing industry in India have been presented in a scientific manner and indication has been given as to the lines along which a solution may be attempted. If this introduction helps the general reader to take a more intelligent interest in the economic problems of the day the author will consider his labour amply rewarded.

In the Appendix have been printed the questionnaires issued by the Bengal Industrial Survey Committee and the National Planning Committee. The author expresses his gratitude to the Secretaries of these two Committees for having kindly permitted him to include these in the book.

Last, but not least, the author desires to express his deep gratitude to the Hon'ble Mr. N. R. Sarker who, in spite of his other pre-occupations, kindly consented to write a Foreword to the book and thereby made available to its readers some of his valuable knowledge about the problems of industry.



## FOREWORD

In recent years the subject of economic planning of which industrial planning is but a part has provided a study of absorbing interest to Indian economists and statesmen alike. Several factors of economic and political significance that came into prominence during the last decade or so have invested it with a special importance in the present stage of India's economic and political evolution. The initial interest created in the subject is, of course, to be traced in India, as elsewhere in the world, to the grandiose scheme of national economic reconstruction launched in Soviet Russia. Even apart from the ideology behind it, the Soviet scheme and the actual results of its working had an appeal for the capitalistic countries by way of not only emphasising the need for a planned control of the economic activities of the nation but also demonstrating how it was practicable to accelerate the pace of the economic development of a backward country by planned action of Government. The capitalistic countries of Europe which emerged from the last Great War with an economic system completely thrown out of gear were not slow to respond to the inspiration of the Russian experiment although they have never been sparing in their condemnation of the communistic ideal behind the Soviet scheme. In almost all these countries, bodies of experts have been set up in some form or other suiting their constitutional traditions to advise their respective national parliaments in regard to future economic policies. And, as a matter of fact, the economic history of most of these countries for the last decade reveals a steady expansion of State control over the economic activities of the nation. For a country like India, with vast potentialities of which but a very small part has presumably been realised during a century and a half



of *laissez faire* economy following the industrial revolution, it was but natural to react to this new wave of enthusiasm that has swept over all progressive countries of the world.

The second factor which very largely reinforced the arguments for economic planning with a view to reconstruct national economy was the great economic depression which set in in 1929. It had disastrous reactions on predominantly agricultural countries like India where prices suffered a much heavier fall than in countries with a balanced economic structure, supported by diversified occupations of the people in trade, commerce, industry and the like. The depression very clearly revealed the perils of a lop-sided growth due to a haphazard economic policy pursued in India and gave an impetus to the urge for guiding the economic development of the country along more rational channels in accordance with an intelligent plan to be devised in the light of the special needs and problems of India. This urge was in fact reinforced by the experience of the country in the matter of industrial development. While in most of the major industries which had developed in India we have almost reached the point of saturation, there are a number of other industries which remain underdeveloped or not at all developed, although we have excellent natural advantages for their profitable exploitation. Such an experience is indeed the legacy of the *laissez faire* policy hitherto followed by Government.

- The third factor which has aroused a special interest in economic planning is to be ascribed to various political ideologies which have for some time past been exercising the minds of different political sections in India in regard to economic policies to be pursued by the future Government at the Centre either under a federal scheme as envisaged in the Government of India Act, 1935, or under any other scheme significant of a higher political status that may take its place. Although this amounts

to thinking ahead, the need for formulating the principles of the future economic plan in advance has been felt as much on some practical grounds as under the urge of defining the attitude of different political organisations towards the economic problems of the country at this psychological moment. A foretaste of the practical necessity has already been provided by the experience of the autonomous Provincial Governments which found themselves compelled to take up the problems in right earnest in their respective spheres. Although they have found their scope for initiative and action restricted owing to the limited powers conferred on them by the Act of 1935, which vests control over currency, tariff etc. in the Central Government and also for want of a co-ordinating central plan, their administrative experience during the last two years or so has revealed that much practical results may be achieved by planned efforts in social as well as economic spheres.

The question of economic planning has thus assumed a practical significance which explains why the Congress, the largest political organisation in India, was called upon to take up the question as a serious practical issue even before the establishment of a fully responsible government at the Centre. Evidently, in such circumstances the nature and complexion of the plan would depend much on the assumption we may make about the Planning Committee appointed by it to draw up a scheme of economic reconstruction in terms of complete economic freedom, taking due care, however, to emphasise that the plan drawn up in this light would provide us with a co-ordinated programme which would guide the various Provincial Governments even within their present limitations and assist them gradually to attain the ideal position in Indian economy. It needs hardly be said that the practical importance or utility of such a comprehensive plan is considerable, although it may not be immediately possible to translate it into action in its

entirety. The delay in the construction of a house, for instance, caused by any unforeseen circumstances, does not detract from the value of the architect's plan; and even in such contingencies building operations may proceed to whatever extent is possible in harmony with the existing conditions and the complete plan that is in view for the future. If, therefore, there are no basic defects in the plan itself we need not fight shy of it, only because some parts of it may not be carried into action. We need only assure ourselves that our economic plan is adequate for our needs and in consonance with the spirit and tradition of the soil, just as the architect's plan must pay due heed to the laws of gravitation and their requirements.

It is, however, a fact that there is a lot of confusion in popular minds about even certain basic implications of economic planning. To some it smacks of a revolutionary concept, just as to many it has the appeal of a magic expression with but a dim appreciation of what it stands for. As a matter of fact, however, it is a very simple concept giving cause for neither cynicism nor superstitious faith. Planning on a national scale is nothing but a wider application of the same principle of common wisdom that prompts an individual to plan his household or his future career. The difference is, indeed, a quantitative one, for in a national plan it becomes necessary to take a much wider view of things not only for co-ordinating the interests of different sections of the community representing particular groups of individuals but also for righting the wrongs of the present and providing against their recurrence in the future.

Nowhere is this foresight more urgently called for than in planning the future developments of industries, for industrial undertakings once started at a particular place or point of time become so identified with the locality and environments that they can hardly be shifted elsewhere without serious prejudice to their

stability and growth. Besides, their inter-dependence makes it incumbent to follow a logical order of development. There are again the questions of adjusting the requirements of the various provinces which are growing self-conscious and their claims to industrial development. It is thus necessary to remember, lest we should be carried away by over-enthusiasm, that in planning our future industrialisation we are not given to write on a clean slate with an unfettered hand and that for our immediate programme at least we are handicapped by numerous external and internal checks. The *raison d'être* and also the excellence of industrial planning would lie, therefore, in devising suitable ways and means by which the impediments of these checks may be surmounted.

The various practical difficulties that confront the task and the various issues to be tackled by planned action have been very lucidly presented by Dr. N. DAS, I.C.S., in his present book on INDUSTRIAL PLANNING to which I have the pleasant duty of writing this FOREWORD. Dr. DAS has endeavoured in this book to explain certain basic problems of industrial planning to those who have not had the opportunity of applying their minds to the subject or have imperfect and sometimes very erroneous notions about it. He has not started with any preconceived ideas in support of any particular doctrine or dogma. Instead, he has made an open, scientific approach to the subject and revealed by an intelligent, analytical study how in respect of practically all the factors of industrial production such as raw materials, capital, labour and enterprise, India now suffers from serious drawbacks which must be removed to accelerate the pace of her industrial development with a view to a progressive growth of her economic prosperity. It is not so much the unravelling of any new drawbacks or problems as their setting against a unified background with suggestions of possible solution

here and there that constitutes the special interest and utility of this book, which, to say the least, bears the impress of a keen rational mind.

DR. DAS has refrained from offering any plan himself. That does not, to my mind, detract from the value of a treatise of this kind. The task of planning is difficult, complicated and much too stupendous for any individual to tackle. Industrial planning in any of its aspects is pre-eminentlly a subject in which clarification of ideas even regarding the nature of the problem means a definite forward step towards its solution and as such the warring ideologies regarding economic planning, giving rise to controversies and sometimes to undue suspicion or pessimism, have also to be clarified. DR. DAS has made a laudable attempt to contribute to this work of elucidation and in this he has succeeded well.

NALINI RANJAN SARKER.

# CONTENTS

CHAPTER	PAGE
I. The Rationale of Industrial Planning . . . . .	7
II. The National Income—A Digression . . . . .	13
III. A Study of Exports and Imports—Another Digression . . . .	17
IV. Problems of Industrial Planning: Raw Materials . . . . .	24
V. Problems of Industrial Planning: Capital . . . . .	28
VI. Problems of Industrial Planning: Labour . . . . .	35
VII. A Further Discussion of the Problem of Wages and Industrial Efficiency . . . . .	40
VIII. Problems of Industrial Planning: Entrepreneurs, Experts and Skilled Workers . . . . .	50
IX. Industrial Promotion and Industrial Management . . . . .	56
X. Company Failures . . . . .	63
XI. Other Problems of Industrial Planning . . . . .	66

# CONTENTS

CHAPTER	PAGE
XII. Cottage Industries and Industrial Planning . . . . .	71
XIII. Unemployment and Industrial Planning . . . . .	84
XIV. Industrial and Technical Education . . . . .	89
XV. Conclusion . . . . .	98
APPENDICES . . . . .	103
BIBLIOGRAPHY . . . . .	141

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## CHAPTER I

### THE RATIONALE OF INDUSTRIAL PLANNING.

#### *A Recital of Certain Fundamental Facts*

In India to-day a large measure of industrialisation is considered to be necessary for various reasons. Firstly, the national income of India is extremely low and it is a universally admitted fact that the inhabitants of this sub-continent are steeped in a poverty for which there is no parallel in any part of the Western world. Although opinions may differ on the question whether poverty in India is on the decline, nobody seriously disputes the proposition that, judged by Western standards, the Indian masses are extremely poor. Secondly, there is no balance in the economic life of the country. As many as seventy-five per cent of the population are dependent on agriculture for their livelihood and it is notorious that nowhere in India is agriculture paying in any sense of the term. Moreover, the extent and variety of the few industries that have grown up during the last hundred years or so have not been commensurate with the size of the country and, not infrequently, ill-equipped or undercapitalised concerns have sprung up without efficient direction or management and, as a consequence, have gone to the wall



no sooner than they were started. Thirdly and finally, owing to the absence of a well-directed industrial policy many important industries which could have been started with some protection from the State have not come into being at all and to-day, after nearly a hundred years of industrialisation, India is dependent on other countries for some very vital necessities of her economic life.

It is principally for these reasons that the demand for some sort of industrial planning has become so very loud to day. People of all shades of opinion are more or less agreed on the need for some effective lead to break the vicious circle in which economic India finds herself to-day. Capital is shy; the necessary equipments are lacking; there are very few technical experts available amongst Indians; entrepreneurs are often inefficient and occasionally dishonest; the country is more or less in a state of industrial stagnation. It is no wonder, therefore, that in such perplexing circumstances, most people seek a remedy in some sort of industrial planning.

### *An Historical Retrospect*

The demand for industrial planning has become intensified ever since provincial autonomy was inaugurated under the new Government of India Act. Under this Act, the provinces as autonomous units have come to possess a very large measure of power in the matter of regulating,

controlling and promoting industrial ventures and, as a consequence, most of the provincial governments have begun to pause and think how a harmonious industrial development can be promoted in the country.

At the present moment the Indian National Congress seems to have made the most effective move in the matter, but it would be a mistake to suppose that the need for industrial planning was first stressed by that body. Some ten years ago, a very effective lead in the matter was given by Sir M. Visvesvaraya in a thought-provoking survey of the potentialities of industrial development in India. In a later book in the year 1933 he again made an eloquent plea for the setting up of some sort of an Industrial Development Council. But no definite action could be taken as the political situation was in a flux and the majority of those who had begun to think seriously in the matter preferred to wait till the new constitution was inaugurated.

### *The Indian National Congress and Industrial Planning*

The new constitution was inaugurated on the 1st April, 1937. It was only in August of that year that the Working Committee of the Indian National Congress formulated a definite policy with regard to industrial and social planning. That month they recommended to the Congress

Ministries the appointment of a Committee of experts "to consider urgent and vital problems the solution of which was necessary to any scheme of national reconstruction and social planning".\* It was recognised that such solution would require extensive surveys and the collection of data, as well as a clearly defined social objective. It was further recognised that any of these problems could not be dealt with effectively on a provincial basis as the interests of adjoining provinces were interlinked. Finally, in July, 1938, it was decided as a preliminary step to convene a conference of the Ministers of Industries of the various provinces and call for a report of the existing industries operating in different provinces and the needs and possibilities of new ones.

The conference of Ministers of Industries of the various provinces was held in Delhi in October, 1938, and the thesis was laid down that the problems of poverty and unemployment, of national defence and of economic regeneration in general cannot be solved without industrialisation. It was decided that as a step towards such industrialisation, a comprehensive scheme of national planning should be formulated—a scheme providing for the development of heavy key industries, medium scale industries and cottage industries, keeping in view the requirements, resources and

\* *First Report of the National Planning Committee* (Bombay, 1939).

peculiar circumstances of the country. With a view to doing preliminary work for giving effect to the above policy, a Planning Committee was appointed.

### *Industrial Surveys in various Provinces*

Meanwhile, the various Provincial Governments (particularly those which did not owe a definite allegiance to the Indian National Congress) had not been sitting idle. In the year 1938 the Sind Government commenced a survey into the question of acute unemployment and the Assam Government appointed a committee to go into the subject of industrial development in that province. In Bengal early in 1939 an Industrial Survey Committee was constituted with eminent scientists, economists, industrialists and businessmen to make a thorough investigation into prevailing conditions of large, medium-sized, small and cottage industries in order to assess their future possibilities and also to suggest lines of new development.

### *An Important Distinction*

It may be noted here that there is one important distinction between the objectives of the National Planning Committee set up at the instance of the Indian National Congress and those of a body like the Bengal Industrial Survey Committee. The National Planning Committee

has in view the framing of a scheme of "national reconstruction and social planning": it aims not merely at industrial planning, but also at planning all the different phases of national life including such matters as floods, irrigation, soil erosion, malaria, rent, land tenure, agricultural debt and organisation of peasants and labourers.\* The Bengal Industrial Survey Committee, on the other hand, is out to survey only the industrial aspect of national reconstruction: it frankly admits that a modest but serious beginning is much better than a lot of grandiose planning. The future alone can tell which of these two methods of approach is likely to yield more substantial and practical results. In this book, however, we shall study only industrial planning, and not the various phases of national economic planning as defined by the Congress.

\* As a matter of fact, the schematic outline of the National Economic Planning Committee includes the following items: (1) land planning; (2) water planning; (3) national resources planning; (4) labour; (5) agricultural planning; (6) industrial planning; (7) planned trade; (8) planned credit; (9) planned finance; and (10) planned education.

## CHAPTER II

### THE NATIONAL INCOME—A DIGRESSION.

#### *Estimates of the National Income*

Estimates of average *per capita* income in India have been made since 1876, although satisfactory data on which such estimates can be made are conspicuously absent in India. In that year, Mr. Dadabhai Naoraji calculated that the average income per head of population was Rs. 20 per annum. In 1882, Earl Cromer (then Major Evelyn Baring) and Sir (then Mr.) David Barbour computed the average income per head at Rs. 27 per annum and in 1901 Digby put the figure at Rs. 17/4/- only. Official statisticians, on the other hand, questioned the accuracy of these figures and, by a separate calculation, arrived at a figure of not less, and might be more, than Rs. 30.

In recent years, attempts at more scientific calculation have been made. Mr. Findlay Shirras made an estimate for the years 1920-21 and 1921-22, including in his calculation items that had been left out by the earlier computers, and arrived at the figure Rs. 107 for the year 1921 and Rs. 116 for the year 1922. At the same time two sets of Indian economists, Messrs. Wadia and Joshi on the one hand and Messrs. Shah and Khambata on the other, had made calculations

relating to the years 1913-14 and 1921-22 and arrived at two figures, Rs. 44/5/6 and Rs. 74/0/6 which were very wide of the figures presented by Mr. Shirras. Recently, another Indian economist, Mr. V. K. R. V. Rao, has made still another estimate, relating to the year 1925-29, and has arrived at the figure of Rs. 77. 9 per head per annum. \*

### *Facts behind the Figures*

Now, all these figures are apt to bewilder rather than help the general reader. The figures have been quoted just to show what a wide diversity of views is possible even among experts on a comparatively simple subject. While comparing the various computations, the following facts should, however, be remembered. Firstly, they relate to different dates and if account is taken of the change in prices on those dates, much of the wideness of the margin of computation will disappear. Secondly, the area covered by these various computations is not always the same. Thirdly and finally, no standardised data having been available, these estimators arrived at their figures by widely different methods and it is difficult to say which method is more accurate and scientific.

One thing, however, is certain. *Per capita* income in India is conspicuously low when judged

\* V. K. R. V. Rao : *An Essay on India's National Income* (London, 1939).

by Western standards. Admittedly, it is not fair to make comparisons when the figures called by the same name in different countries do not have exactly the same value, but the following comparative figures are too eloquent to be whittled away by any such arguments :

*Income per Capita in 1914 \**

Name of country.	Income per head per annum.	
United States	..	£ 72
Australia	..	£ 54
United Kingdom	..	£ 50
France	..	£ 38
Germany	..	£ 30
Japan	..	£ 6
India	..	£ 3

That *per capita* income in India is exceedingly low is also proved by the results of various intensive local enquiries that have been made from time to time. Three such investigators were Dr. Mann in Bombay, Dr. Slater in Madras and Major Jack in Bengal. They all found out that *per capita* income in the selected areas where they carried their investigations was something between Rs. 42-14 and Rs. 52 during the period immediately towards the end of the last World War.

\* Sir Josiah Stamp: *The wealth and Income of the Chief Powers* (London, 1919).



The importance of these figures lies in the fact that they reinforce all arguments for industrial planning. Even the most optimistic observer \* has to admit that in India to-day the margin between sufficiency and scarcity is a very narrow one, and if the monsoon fails over a considerable area there is at least a tendency towards actual insufficiency for the country as a whole, to say nothing of the specially afflicted areas. The conclusion, therefore, is irresistible that agriculture must be supplemented by a well-balanced scheme of industrialisation and that the present tempo of industrial development considerably accelerated before any substantial increase in the income per head can be attained.

\* E. g., Dr. V. Anstey: *The Economic Development of India* (London, 1931).

## CHAPTER III

### A STUDY OF EXPORTS AND IMPORTS—ANOTHER DIGRESSION.

#### *Introductory*

The Indian National Planning Committee has defined the principal objective of planning to be to attain, as far as possible, national self-sufficiency and not primarily to capture foreign markets, although it has been cautious enough to state that this does not exclude international trade.\* In the opinion of the present writer, the National Planning Committee has not laid on a study of India's export and import trade the emphasis it deserves. An attempt will be made in this chapter to show that no scheme of industrial planning can succeed until and unless the main features and trends of our export and import trade have been studied.

#### *Characteristics of the Foreign Trade of India*

What strikes the superficial observer most is, the fact that in this country the value of exports has always exceeded that of imports. There are isolated years (e.g., 1920-21 and 1921-22) when exports lagged behind imports in value, but there is no quinquennial period commencing from 1869-

\* *First Report of the National Planning Committee* (Bombay, 1939).

70 (the Suez Canal was thrown open for navigation in 1869) when the average of exports fell below the average of imports. This habitual excess of exports over imports gave rise to the facile theory that it was a measure of the tribute paid by India to England for her political subjection, but as has been repeatedly pointed out by a number of economists, the excess represents payments of interest on debt of all types and annuities on account of railways and irrigation works, payments in connexion with Civil departments in India and the India Office, Army and Marine charges, payments for stores purchased and furlough allowances, and as such cannot be called a "drain" in any sense of the term. The inevitable conclusion, therefore, is that the mere excess of exports over imports does not furnish anything like a complete explanation of the backwardness and poverty of India. For that we must analyse the *nature* of exports and imports.

A careful analysis of the export and import trade of India shows that even now we are largely dependent for some of the ordinary requirements of life on imported manufactured goods. India is a vast country with a large home market and abundant raw materials, but instead of working these raw materials into consumable form, she seems to have preferred to export raw materials and to import most of her requirements in respect of manufactured goods.

*A Few Facts*

A few instances will make this very clear. In the year 1937-38 India exported about 181 crore of rupees worth of merchandise and of these manufactured goods were worth only 54 crores viz., jute manufactures—29 crores, cotton manufactures—9 crores, wool manufactures—2 crores, tea—9 crores and miscellaneous—5 crores. All the other items of export consisted of raw jute, raw cotton and raw wool, metals and ores, grain, pulses, spices and flour, wood and timber, raw rubber, fruits and vegetables, manures, hemp, hides and skins, fish, seeds and oilcakes, lac, mica, coffee and coir. Imports in the same year amounted to nearly 174 crore of rupees and of them only a small percentage consisted of raw materials or foodstuff. These point to the fact that India's economic development has been most uneven and her industrial progress anything but satisfactory.

Detailed analysis of the individual items of export and import reveal another interesting thing. India exports many raw materials to other countries, but later on she has to re-import those very items, with only this difference that the articles so sent are sent in a finished form. It would certainly save costs and also promote industrial efficiency if these raw materials could be "finished" in India. Unfortunately, however, India lacks machinery and expert guidance and conse-

quently she has to re-purchase practically her own goods at a considerably high price. Thus we find that in the year 1937-38 while India exported nearly Rs. 30 crores worth of raw cotton, she had to import almost as much (Rs. 27 crores) semi-finished and finished cotton goods. Similarly, she exported Rs. 84 lakhs worth of raw rubber and imported Rs. 189 lakhs worth of rubber manufactures; she exported Rs. 200 lakhs worth of raw tobacco and imported Rs. 85 lakhs worth of cigars, cigarettes and finished tobacco; she exported Rs. 5 crores worth of raw hides and skins and imported Rs. 22 lakhs worth of boots and shoes.\*

It may be argued that these figures of exports and imports are misleading in as much as exports may indicate a real surplus and imports a real demand which manufacturers within the country are unable to meet. A close analysis, however, shows that the position is not so simple. Many raw materials *have* to be exported because there are no manufactories in India where they can be worked out into a finished form. As far as the cultivator is concerned, he is interested mainly in getting a decent price for his product and his position is not in the least bit affected whether his commodity is used in the factories of his own

\* The present War has further demonstrated the pathetic dependence of India on foreign countries with regard to some essential chemicals and certain kinds of paper, film etc.

country or elsewhere. The prices he gets for such commodities as cotton, sugar-cane and tobacco which are both exported and used in the few mills and factories in India show that he neither gains nor loses by a policy of exportation for manufacture abroad in preference to one of internal consumption.

### *India's Pathetic Dependence on Foreign Countries*

A detailed study of the items of export and import is instructive from another standpoint. Although a few industries have been fairly well established during the last few years, detailed figures of international trade show that even in those industries India is still pathetically dependent on foreign imports. Thus we find that India had to import  $2\frac{1}{2}$  million lbs. of counts 31 to 40 and  $4\frac{1}{2}$  million lbs. counts above 40 cotton twist and yarn in the year 1937-38, although these counts could easily have been manufactured (and in adequate quantities) in this country. So far as twofolds (doubles) were concerned, there was no internal production at all and the same year India imported from abroad  $14\frac{1}{2}$  million lbs. of this yarn. Again, in the range of fully manufactured cotton goods, India imported in 1937-38 as many as 591 million yards of cotton piece-goods (value nearly Rs. 12 crores) and there was a definite increase in the import of white and coloured

goods. Other similar imports were Rs. 29 lakhs worth of hosiery, Rs. 43 lakhs worth of sewing thread and Rs. 6½ lakhs worth of haberdashery and millinery. Again, the total value of imports of artificial silk and silk manufactures rose from Rs. 371 lakhs in 1936-37 to Rs. 487 lakhs in 1937-38 and there was a phenomenal import of nearly Rs. 2½ crores worth of woollen manufactures, shawls, carpets and floor rugs alone.

These figures show that even within the range of well-established industries, development has been proceeding along certain stereotyped lines and very few industrialists have bothered to analyse figures of import and embark on new items of production. It may be argued that no country, least of all India, can become self-sufficient in respect of *all* the items in a particular branch of industry, but in the opinion of the present writer, there is no reason why this should not be possible in at least those industries which are more or less well established. That it is possible for India to become almost completely independent of foreign supplies in some items is proved by the recent phenomenal growth of the sugar industry : only 19 lakhs worth of sugar were imported in the year 1937-38 and that also mainly for re-export, but twenty years prior to this, the people of India were almost wholly dependent on foreign sugar. \*

\* *Review of the Trade of India in 1937-38* (New Delhi, 1939).

*A New Approach to the Problem is Needed*

The fact is that so far analysis of India's overseas trade has been confined mainly to *countries* to which articles are exported and from which articles are imported, and hardly ever to the *nature* of exports and imports. The attention of our politicians at Delhi and Simla has been directed more to the question whether an agreement with Great Britain and the Dominions is beneath the dignity of India or not, and less to the fact that with judicious expansion it might become both feasible and convenient for India to become completely independent of foreign supplies in at least certain items of manufacture. The result has been that our industrial manufacturers have gone on extending their old plants or setting up additional ones mechanically and along traditional lines of production. Because cotton manufacture appeared to be quite paying, hundreds of cotton mills were set up all over the country, but there were few entrepreneurs who thought of setting up artificial silk or wool factories. Because sugar mill owners seemed to be making money rather easily, sugar mills were founded even in remote corners of India, but few thought of starting a rubber factory or a salt manufactory. It should be one of the duties of Industrial Planning Commissions and Committees to analyse in detail the nature of overseas trade and to indicate in what specific directions the next move in development is desirable.



## CHAPTER IV

### PROBLEMS OF INDUSTRIAL PLANNING : RAW MATERIALS.

#### *What Industrial Planning Includes*

Such a lot of nonsense has been said about industrial planning by pseudo-economists and platform politicians that it is necessary to know what is meant by this rather simple expression. Industrial planning does not necessarily imply state ownership or even state control of all industrial undertakings. It means a study of the various factors of industrial production—raw materials (agricultural and forest products as well as minerals), capital, labour, skilled workers and power, as also of such matters as marketing and transport which very much affect the price and competitive position of industrial products. In a country like India where nearly 80 per cent of the population are dependent on agriculture for their livelihood, it also includes a study of (a) industries subsidiary to agriculture and (b) so-called cottage industries.

A word about the nature and method of this study. It is possible to make merely a subjective and detached study of the factors of industrial production and other allied matters, but the in-

dustrial planner cannot rest content with a mere study. He is more interested in devising practical courses of action whereby a harmonious industrial development may be promoted and the rate of industrial production as a whole accelerated. His object is to make concrete suggestions about the steps which should be taken in this regard both by the State and by private entrepreneurs. He definitely wants to get the industrial machine going.

Turning to India, at first one is apt to be bewildered by the vastness and complexity of the problem. The need for action appears so urgent and in so many directions that one is tempted to apply the surgeon's knife everywhere without pausing to consider whether the economic system can withstand so many incisions at a time. It is here that the industrial planner can make a valuable contribution. Based as his suggestions are on a study of the various phases of economic life and their complex and multifarious interactions, he is likely to advise prudence and caution notwithstanding the fact that less scientific but more ardent advocates of progress and revolution may feel inclined to embark on visionary and grandiose schemes.

### *Importance of Raw Materials*

As has been stressed already, the problems that face the industrial planner are many and complex. First and foremost may be mentioned

the problem of raw materials. It is true that raw materials for almost every industry are being exported every year in large quantities because the producing country has no use for them, but so far no comprehensive scientific study of the raw materials available has been made nor has it been assessed how far these raw materials can be put in local manufactories without any intermediate treatment from abroad. It cannot be denied that the methods of agricultural production are still far from satisfactory and that the undoubtedly valuable scientific crop studies that have been, and are being, made in various Government farms and agricultural research stations have failed to make their impress on the average cultivator in the fields. The recent plight of sugar manufacturers unable to keep factories going or meet demands in the market, because sugarcane of the requisite quantity and quality could not be had during the crushing season, shows that even in the matter of agricultural production drastic changes are necessary. Again, the cultivation of long-staple cotton has not yet been attempted on any large scale and the results of research work in the agricultural departments of Government have so far not been made available to illiterate cultivators. What prospects are there of the successful building up of a sugar industry or a cotton industry dealing in finer counts as long as the problem of raw materials, viz., adequate and effective

supply of sugarcane and long-staple cotton is not tackled ?

The same remarks apply to forest and animal products and minerals. It is well-known that India possesses an enormous wealth of timber which may be utilized for industrial purposes (e.g., manufacture of pulp for paper, matches, packing cases etc.) but no comprehensive exploration has yet been made nor has anyone seriously attempted to find out ways and means of commercial utilisation of these resources. Turning next to animal products we find that the quality of animals is poor. In minerals, on the other hand, India is supposed to be one of the largest and, in some cases, the foremost producer in the world, but, barring the case of iron and steel and petroleum, a primitive type of exploitation is almost all that we know of mining activity in this country.

### *Conclusion*

The conclusion is thus irresistible that any scheme of industrial planning must take into account the fact that our knowledge about raw materials available for industry is meagre and incomplete. We must make a study of our raw materials (agricultural, forest, animal as well as mineral) before we can plan a scheme of industrialisation : we must know the nature and quality of these indispensable accessories before we commence building up a structure.

## CHAPTER V

### PROBLEMS OF INDUSTRIAL PLANNING : CAPITAL.

#### *A History of Capital Investments*

The next problem that planners have to face is that of capital. A perusal of the history of industrial development in India shows that industrial activity here is not more than half a century old. It is true that a few industrial undertakings were started in the first half of the nineteenth century—by British capitalists in the Bengal Presidency and by some Indian merchants in the province of Bombay, but they were more or less simple pioneer undertakings started in rather a haphazard fashion and none of them presented the elaborate problems of modern capitalistic enterprise—the problems of finance and management. It was only after the *Swadeshi* movement of 1905 that more and more people turned their attention towards the promotion of new industrial ventures and then difficulties began to be encountered. These difficulties have increased with the passage of years.\* Entrepreneurs complain that capital is inadequate both for the launching of new enterprises and for the development of existing ones and for this they blame the apathy of the general

\* N. Das: *Banking and Industrial Finance in India* (Calcutta, 1936).

body of investors and the conservative policy of banks. Investors and the general public, on the other hand, reply that it is the defective management of industrial enterprises that is at the root of all the trouble. The task of the industrial planner is to find out if these apparently conflicting statements can be reconciled and, if so, how.

### *Capital Requirements of Industry*

It is generally asserted that industrial development has been slow because both fixed and working capital had, and still has, to be obtained at rather a high cost. Although in recent years the tendency has been towards securing block or fixed capital by public or private subscription of shares or debentures, it is well-known that the method of direct deposits and of providing money on private account by an individual or partnership has been the vogue in many industries. This latter method has in practice been found to be inefficient and uneconomical for various reasons. Firstly, owing to the prevalence of this system of finance, industry has come to be dominated too much by financial considerations, and too little by industrial ones. Secondly, no mill company has been able to develop its own system of finance independently of its managing agents. Thirdly, a direct consequence of financial control has been that managing agents have, in recent years, been inclined to usurp for themselves more and more

power through the instrument of agency agreements, and outside investors have become rather unwilling to put their money in undertakings which are too rigidly controlled by certain groups of agents-financiers. \*

### *How Capital is Obtained*

Industrial undertakings in India often experience difficulty in finding working capital as well. Broadly speaking, there are four sources of working capital—(1) public deposits; (2) private deposits or money on private account provided by entrepreneurs, their friends, and/or managing agents; (3) advances by indigenous shroffs; (4) advances by joint-stock banks. Now, in all industrially advanced countries, by far the largest proportion of working capital is supplied by banks, but in India this has not been the case, and for a variety of reasons. From the very beginning, the orthodox tradition of English banks, viz., the practice of giving loans for short periods and against certain forms of security alone has been very rigidly followed by all joint-stock banks working in this country, both Indian and European. Most of the advances given by joint-stock banks are against tangible and marketable securities lodged or pledged with the lender or against personal credit with a second signature

\* For a detailed study, see N. Das: *Industrial Enterprise in India* (London, 1938).

on the pro-note. In India there are very few clean advances without a second signature—a class of advances which occupy an important place in the highly developed banking systems of Europe and America. This rigidity in the matter of short-term credit has both affected, and been affected by, the managing agency system of organization in Indian industries. It has affected the system in two ways : firstly, it has made many managing agents almost unwilling to go to a bank for a loan which would require them to pledge their stocks and thereby might entail loss of the confidence of their public depositors ; secondly, the two-name rule has made the backing of managing agents in the matter of finance virtually indispensable and has thereby effectively curtailed the independence of industrial units. On the other hand, the very responsiveness of the managing agency system to their demands has made it possible for banks to remain rigid with regard to their loans and advances, and to insist on full backing by the agents.

Rigidity is not the only defect of short-term credit in India. In recent years, it has tended to become costly also. In course of the enquiries made by the Indian Central Banking Enquiry Committee during 1929-30, it was repeatedly asserted by Indian entrepreneurs that the rates of interest charged to industry for loans and advances are generally higher than industry can



bear. The larger joint-stock banks make advances usually at the official bank rate or at 1 per cent higher ; but the smaller ones—and there is a multitude of them—charge at least 2 to 4 per cent higher. As a matter of fact, many banks admitted before the Banking Enquiry Committee referred to above that they usually advanced loans at rates varying from 10 to 15 per cent even on the security of mortgage bonds.

### *Problems of Industrial Finance*

Industrial planners cannot afford to overlook these facts, because in the absence of a regular and fairly inexpensive supply of capital, any scheme of industrial expansion is likely to founder on the rocks of finance. The problem is to find out whether any special financial institutions should be set up (either with or without the backing of the State) to provide capital to industry or whether, by legislation as well as by persuasion, existing joint-stock banks should be forced to give up their present conservative attitude towards industrial promotions in general. There are dangers in madly rushing to either of these two alternatives. A State-aided Industrial Bank may easily lead to political pressure of various kinds on industrialists ; it may also mean constant official interference in matters which should best be left to the decision of industrialists and entrepreneurs. Again, it is doubtful if in the

present position of the capital market in India a private Industrial Bank with fairly decent financial resources should be started at all : the failure of the Tata Industrial Bank established in 1918 with a very efficient directorate and an intelligence service composed of a number of select technical experts and commercial men must make any enthusiast pause and consider. On the other hand, in the present stage of industrial development, most of the Indian joint-stock banks hesitate to combine investment banking with commercial banking on the lines followed by German and other Continental banks. Banks in India are small, with inadequate resources of paid-up capital and reserve, and their assets which consist largely of customers' deposits liable to be withdrawn at short notice, cannot obviously, without incurring serious risks, be locked up in long-term advances or loans to industry. Moreover, the whole history of industrial finance in India shows that investment banking by institutions which are organized as commercial banks inevitably leads to speculation and rash promotion.\* Mixed type of business requires much experience and an established policy of sound banking and the bulk of the joint-stock banks in India lack both. It is for industrial planners to find a way out of this intriguing dilemma.

\* N. Das : *Banking and Industrial Finance in India* (Calcutta, 1936).

*India's Potential Financial Resources*

Behind the problem of finding capital for new industrial promotions lies the larger problem of India's potential financial resources. In the long run the problem of industrial finance is a problem not only of the mobility of the financial resources of a country but also of its quantity and quality. The development of banking depends to a very great extent on the growth of the investment habit which in turn depends on the earning capacity of the people, their will to save, the incentive to save, and the facilities for investment. The position, however, is that although there are fairly good facilities for investment, people do not put enough of their savings either in banks or in industrial promotions. Perhaps the situation can be improved if existing banks are consolidated, all mushroom banks and loan offices weeded out and a comprehensive reform of banking law undertaken. But this by itself is not likely to lead to the results that are desired : better still would be the setting up of an organization which would teach the average investor in India to think industrially, to take and make bold ventures and to have a long view of things. What shape this organization should take it is for the industrial planner to decide.\*

\* N. Das : *Industrial Enterprise in India* (London, 1938).

## CHAPTER VI

### PROBLEMS OF INDUSTRIAL PLANNING : LABOUR.

#### *The Problem of Labour*

No workable plan can be put forward unless due note is taken of the most important factor in industrial production, viz., labour. With the steady progress of large-scale industries and the rise of factory towns, modern labour problems as understood in the West have gradually come into prominence in this country. There is a new mass awakening and workmen have become more and more conscious of their privileges and rights. On the one hand, it is often assumed by employers that good conditions of work for labour involve a sacrifice for industry. Workers, on the other hand, seem to think that they can go on strike as often as they like and on all sorts of pretexts, and at the same time remain unaffected by the losses sustained by industry. The industrial planner's duty would be to prove, firstly, that both these ways of thinking are fallacious and, secondly, to suggest how labour can best be harnessed as an important factor of production in industry.

The most interesting point about labour supply in the mines and factories of India is that most factory labour is still drawn from rural areas and the migration from the rural areas to the factories

is not generally a permanent exodus. It is, in the minds of those who undertake it and to a large extent in fact, a temporary transfer, and recruits to industry continue to regard as their home the place from which they have come. This does not mean that factory workers are all agriculturists : there are in the villages important sections of the population whose occupation is not primarily agricultural and may not be agricultural at all, and they generally drift to the towns to work in mills and factories. The desire to maintain contact with villages, however, remains and has important effects on the efficiency of labour as a whole. This home-sickness makes it difficult for industrial workers to get reconciled to changes in environments and to acquiesce in unsatisfactory conditions, and also necessitates a continuous turnover of employees, many of whom may be entirely new to a factory, its machines and methods of working, with a consequent loss of efficiency which reacts on both the management and the workers. On the other hand, this contact with villages has its advantages. Firstly, it means that most industrial workers have been brought up in more natural surroundings and have a better standard of physique than could be built up in many industrial areas. Secondly, the combination of urban and rural life brings a width of outlook which is apt to be lacking in a purely urban population. Finally, the villages provide a mea-

sure of insurance against the effects of various changes which may reduce, interrupt or destroy the earning capacity of workers. \*

### *Efficiency of Industrial Labour*

The question of efficiency of industrial labour is so important that any scheme of industrial planning must suggest ways and means of increasing it. Although it is impossible to measure the comparative efficiency of labour directly, owing to differences in the processes adopted and in the organisation, machinery and quality of the raw materials used, it is universally admitted that the Indian industrial worker produces less per unit than the worker in any other country claiming to rank as a leading industrial nation. This is due partly to climate and to long hours of work in an uncongenial atmosphere, but the most powerful cause is the low standard of living. There is a vicious circle in this: weakness arises from the hardships to which the worker, who starts with an indifferent physique, is subjected and especially from his unsatisfactory diet and the conditions under which he is generally compelled to live; these hardships and conditions are mainly the result of inability to afford anything better, and this in turn arises from low efficiency. Thus "poverty leads to bad conditions, bad conditions to inefficiency and

\* *Report of the Royal Commission on Labour in India* (New Delhi, 1931).

inefficiency to poverty". In addition, slack discipline and bad organisation reduce output per head. It should be the aim of industrial planners to break this circle at as many points as possible.

The question now arises how the efficiency of labour can be increased. Improvement of housing conditions and provision of adequate facilities for amusements, games and education are the first requisites. The "bustees" of Bengal, "chawls" of Bombay and "cherries" of Madras may represent extreme instances of bad housing and overcrowding, but barring the housing schemes of a few enlightened employers, general conditions of housing for industrial workers in India are any thing but satisfactory. It may not be possible for employers to provide all the amenities that are required, but there is no reason why municipalities, railways and the State should not give direct assistance in this matter. The present chaotic condition of housing is to a large extent due to the lack of co-ordination between the parties concerned and to the apparent doubt as to where the responsibility lies.

#### *The Problem of Industrial Disputes*

Another important matter which should engage the attention of industrial planners is the recent frequency of strikes and other industrial disputes. While improvement in housing condi-

tions and provision of adequate facilities for amusements, games and education are likely to improve the standard of living of the industrial worker and make him more contented, it would be rash to suppose that these by themselves would prevent strikes and lockouts in future. Various causes, economic and political, are bound to lead to disputes between employers and employees and it should be the duty of the State to convince them that compulsory stoppage of work due to a strike or a lockout is harmful to both the parties. It should also be possible for employers to permit the formation of Workpeople's Welfare Committees or similar organisations, as these would enable the management and workers to get into closer touch, resulting in a better understanding of each other's point of view. An external machinery for settling disputes, i.e., some authority either entirely or partly independent of the industry concerned, may be helpful at times, but it can never take the place of machinery established *within* an industry to deal with disputes as they arise.



## CHAPTER VII

### A FURTHER DISCUSSION OF THE PROBLEM OF WAGES AND INDUSTRIAL EFFICIENCY.

#### *The Royal Commission on Labour and After*

The last twenty years in India have been so very much crowded with almost continuous industrial strifes and the appointment of committees and commissions to enquire into, and make recommendations in connexion with, the causes of these strifes that it is necessary to go into this labour question in some detail. For, although a Royal Commission on Labour went into this intricate subject with remarkable thoroughness during the year 1929-30 and published a very comprehensive report the following year, the fact that labour troubles still continue unabated should make us pause and enquire. Have all the recommendations of the Royal Commission been acted upon? Does any of their recommendations require modification now—ten years after they reported?

Here, two points may be emphasised. The Report of the Royal Commission on Labour has been the lodestar of all the various pieces of legislation which have been placed on the Indian Statute Book since its publication; and it will continue to be the text-book for social legislation and labour welfare in India for many years to

come. Secondly, with the inauguration of provincial autonomy and the placing of the responsibility for labour welfare on Ministers answerable to the electorate for their acts of omission and commission, there has been an outburst of legislative measures for the amelioration of labour conditions in all the provinces. Every province has got a separate Minister for Labour and a special department to help the Minister in his work. But this decentralisation has resulted in a certain lack of uniformity and consistency in the labour policies which are being pursued by different provinces. There is a danger that these disparities may be pushed too far : such disparities must eventually tend to weaken the competing power of the more advanced provinces, especially when they are, in addition, faced with increased Central and Provincial taxation.

It will be useful at this stage to make a rapid survey of the various measures that have been enacted during the last ten years to cope with this labour problem. Most of the recommendations of the Royal Commission with regard to expansion of the scope and improvement of existing Acts relating to conditions and hours of work in factories and mines, workmen's compensation, and control and supervision of the labour which migrates to tea and other plantations in Assam have already been implemented by amending or consolidating Acts. Acts amending the Trade Dis-

putes Act of 1929 \* and placing it permanently on the Statute Book were passed in 1932 and 1934. Acts to prevent the pledging of children and to facilitate the acquisition of land for industrial housing were passed in 1933. Legislation on the line of the British Truck Act to control deductions which employers may make from wages in respect of fines and to provide for early payment of wages due was passed early in 1936. § Various other proposals for new labour legislation in connexion with employer's liability, workmen's compensation, exemption of salaries and wages from attachment etc. were also considered by the Government of India in consultation with the various Provincial Governments, but as provincial autonomy was due to be inaugurated in April, 1937, and the responsibility for labour welfare placed on the shoulders of Provincial Ministers, legislation on most of these subjects was kept in abeyance. Provincial autonomy has, however, resulted in a large crop of legislative measures in some of the provinces. Thus, in Bombay in the year 1938 was passed the Bombay Industrial Disputes Act after a record debate of nearly

\* This Act was modelled to a large extent on the British Industrial Courts Act but it does not provide for any standing Industrial Court. Disputes can be referred either to Courts of Enquiry or to Boards of Conciliation. The Act also contains provisions rendering punishable by fine or imprisonment lightning strikes or lockouts in certain public utility services.

§ These include the Indian Factories Act, 1934, and the Payment of Wages Act, 1936.

150 hours spread over 33 days. Further proposals providing for the recognition of unions of workers by their employers, the grant of holidays with pay during periods of sickness, the regulation of hours of work and rest periods, and the grant of holidays were made in 1939 and legislative measures were introduced in the Provincial Assembly. In the Central Provinces, the Unregulated Factories Act was passed early in 1937, regulating the labour of women and children and making provision for the welfare of labour in factories to which the Factories Act of 1934 did not apply. Further bills have been introduced in the Legislative Assembly of that province for the collection of statistics and for relief or benefits to workers in industrial occupations who are rendered unemployed and consequently destitute. In Bengal, an Act was passed in 1938 for the payment of maternity benefits to women workers in factories. Measures for regulation of hours of work and conditions of employment in shops have also been introduced in the local legislature. In addition, many of the provinces appointed Labour Enquiry Committees and their recommendations were generally given effect to by the Provincial Governments concerned. \*

\* The most important of these Committees were—(1) the Bombay Textile Labour Enquiry Committee, (2) the Cawnpore Labour Enquiry Committee, (3) the C. P. Textile Labour Enquiry Committee, and (4) the Bihar Labour Enquiry Committee.

*The Crucial Problem of Labour : Antagonism and Class Hatred*

The above recital of legislative enactments shows that as far as legislation can help, no Provincial Government has hesitated, and will hesitate, to adopt suitable measures for labour welfare in general. But this labour problem in India cannot be solved by the mere passing of new Acts and administering them through an army of factory inspectors and supervisors. Much more important is the general attitude of employers and workers towards each other. Until and unless the present feeling of antagonism and class hatred disappears, the future of industrialism in India will continue to cause anxiety to all who have the welfare of the people in their heart. As has been well emphasised by the Hon'ble Mr. H. S. Suhrawardy, Labour Minister, Bengal, in a remarkably forceful speech on the subject, "when the labour flag is invariably coupled with revolutionary slogans and by a ferocity and hatred which are undermining the very foundations of the social structure, it is impossible to consider it as the flag of a genuine labour movement . . . . . It is essential that its sponsors should enter the field as responsible labour leaders and not as politicians exploiting labour for personal, political or revolutionary motives."

*Wages and Industrial Efficiency*

The most crucial subject as far as labour is concerned is wages. To the worker and his dependants wages are the means of livelihood, although to the employer they are an item of productive costs. The importance of wages lies in the fact that wages have important reactions on the standard of living and, through it, on industrial efficiency. "It is true that this effect may not be always immediate or direct. Indeed, in so far as low wages also imply low labour cost—and this is often possible in certain trades employing low grade manual labour—the employer may remain unconcerned about the workers' efficiency. Equally is it conceivable that an increase of wages may have little effect in improving the standard of living of workers and their efficiency. But over a long period of time and from the national point of view, the securing of a reasonable standard of earnings for the worker is an essential requisite of industrial efficiency." \* It is because of this interaction of wages on industrial efficiency that the subject has to be gone into in detail by the industrial planner.

*Money Wages and Real Wages*

In the preceding chapter we have noticed that the efficiency of the Indian worker is extremely

\* P. S. Lokanathan : *Industrial Organisation in India* (London, 1935).

low and he hardly feels stimulated to make great efforts at improving his standard of living. And bad conditions of living lead to further inefficiency. Now, this vicious circle can only be broken slowly, and the most vulnerable point where this can be broken is in the sphere of wages. As we have seen already, labour legislation has made tremendous progress in recent years and although it has not been found practicable to lay down a standard of minimum wages, various loopholes to evade payment of money wages or to cut down such wages by means of fines, impositions or surcharges have been effectively stopped. But the welfare of the industrial worker is determined not so much by *money* wages as by *real* wages, i.e., by what wages can buy. Although money wages have increased appreciably during the last fifteen years, we do not know definitely if his real wages have increased sufficiently to ensure a better standard of living. The fact that the Indian worker is not free to spend all his money wages on himself and his family offers the greatest difficulty to a solution of this problem of increasing efficiency by raising money wage rates. Heavy inroad upon the worker's income is caused by his dependence on the money-lender : the budget of the worker's family in any province and locality reveals the existence of a large amount of debt incurred on account of marriage, sickness, death or insufficient income to meet the primary

necessaries of life. There is also another difficulty. The Indian worker has a fixed standard of living which is on a very low level, with the result that when he has earned enough to maintain that level he ceases to make any further effort to raise his standard. The coal miner's ambition is to return to his village as quickly as possible, and if a fortnight's continuous work rather than three weeks' work would give him a sufficient income to go back with some savings, he would go back sooner and give less time to mining. The tea garden worker, too, when in receipt of higher wages, would absent himself from the garden for a long period rather than work continuously and earn more. As a matter of fact, this uneconomic outlook on life on the part of workers has, in the past, often deterred employers from raising wages, as they have felt that workers do not respond by showing greater efficiency even when wages are raised. The industrial planner has to suggest how this riddle can be solved and how increased wages can be co-ordinated with better living and greater efficiency in this country in the same way in which it has been done in Western countries.

Even granting that increase in money wages does not have an immediate and appreciable effect in India on standard of living and on efficiency, there are several ways open to employers to bring about the desired improvement. Measures may be taken to ensure that money wages are not



dissipated in wasteful expenditure ; employers may also spend more on what is called "welfare work", because money spent by them in improving the conditions of their workpeople is bound to react directly to the benefit of their workers and indirectly, therefore, to their own benefit. A lot may be done by establishing a Welfare Department in each large mill or factory and by paying greater attention to the improvement of internal conditions therein. Finally, a part of the responsibility for improvement may be taken over by trade unions organised on right lines—by the organisation of co-operative credit and co-operative stores, by the setting up of reading rooms and libraries, by arranging special adult educational courses and by the provision of legal assistance and other benefits.

### *Conclusion*

In conclusion, the point may be emphasised that increased industrial efficiency of the worker is inextricably bound up with a better standard of living and this can only be secured by augmenting his real wages. In a country like India, there is a point beyond which increased money wages may not immediately stimulate the worker to think of, and live up to, a better standard, but there are many other ways in which employers and the State can co-operate and help the worker to get greater

amenities of life. Towards,an exploration of these ways, the energies of the industrial planner should be directed.

## CHAPTER VIII

### PROBLEMS OF INDUSTRIAL PLANNING : ENTREPRENEURS, EXPERTS AND SKILLED WORKERS.

#### *Introductory*

Industrial planners generally become so very much absorbed in the problems of raw materials, capital and labour that they are apt to overlook the important part played by honest and energetic entrepreneurs and qualified experts and skilled workers in the development of industry.

#### *Skilled Workers*

We shall start with skilled workers first. Although India has the advantage of an almost inexhaustible supply of cheap manual labour suitable for industrial production, there is no class of permanent and trainable workers available. Employers have from time to time testified to the manual dexterity and adaptability of Indian artisans, but as a rule the average factory worker in India has little general education and no technical training at all. As a matter of fact most industries are organised on the basis of cheap and illiterate labour, and consequently the cost of supervision is proportionately very high. \*

\* V. Anstey : *The Economic Development of India* (London, 1931).

The greatest difficulty is experienced in such industries as iron and steel, mining, engineering and electrical and chemical industries in which the highest degree of skill and intelligence is required of the operatives. Although the more important firms are trying to train up a class of skilled workers for these industries, the position is still anything but satisfactory. This is partly due to the fact that the more intelligent section of the people, those belonging to the so-called middle classes, have not yet been attracted to work in mills and factories and still prefer so-called "soft-handed occupations" to comparatively arduous manual work in any form. The result is that managers and proprietors have to recruit their workers mainly from the illiterate artisan class. Unless and until the present prejudice against manual labour and the undoubtedly false sense of values with which the educated classes are imbued disappear, there is little hope of building up that class of skilled and intelligent workmen which forms the backbone of industry in Europe and America. It should be possible for industrial planners to find out how the educated classes of India can be harnessed to the service of industry in the same way in which this has been achieved in the more advanced countries of the West.

*Technical Experts .*

Similar difficulty is experienced in finding properly qualified experts as well. In almost every branch of industry India has still to depend on foreign experts and pay a high price for their services. It is true that in recent years attempt has been made to train up batches of assistant experts from amongst the educated men of the country, but it cannot be said that progress in this direction has been commensurate with the needs of industry. Our educated young men are still unwilling to learn new things and specialise in new lines of industrial activity. Thus, it is very difficult to find a properly qualified Indian sugar technologist or a glass expert, although the total number of sugar mills and glass factories is by no means insignificant. Similarly, in such subjects as fruit and fish canning, cutlery manufacture, wood distillation and fuel technology there is hardly an Indian expert of the standing and experience of European and American experts available, albeit at an enormous price, in this country.

This dearth of technical experts is in part due to the fact that the more important industrial concerns are still owned or managed by Europeans who are reluctant to give the same facilities to Indians as they give to Europeans. Many enterprising Indian young men do not feel tempted to specialise in new branches of manufacture or trade because they know there is no guarantee

of their being able to secure decent employment even after they have acquired the necessary technological knowledge. But the very fact that even concerns owned or managed by Indians are compelled to requisition the services of foreign experts shows that the root of the trouble lies elsewhere.

### *Faulty Education and Paucity of Technical Experts*

The paucity of indigenous experts must eventually be attributed to the defective system of education that prevails. From top to bottom the educational system in India is too literary and academic. Higher education here creates a distaste for manual labour; the system of passing examinations with the help of cheap notes, shortcuts and guides kills all originality and incentive in the learner. As has been well put by a leading Indian economist, "university education in India is hopelessly inefficient and cheap. It is inefficient because it is cheap; and it is cheap, almost dirt-cheap, because public opinion in the country demands that it should be within everybody's reach." \* On account of the cheapness and inefficiency of the present system of education, we find that a large number of scholars are attracted to colleges and universities who are too incompetent

\* H. R. Soni: *Indian Industry and Its Problems*, Vol. I (Calcutta, 1934).

to benefit from a higher standard of instruction, or are too poor to make their due contribution towards maintenance of that standard. What are needed, therefore, are a drastic revision of the present educational policy, immediate disaffiliation of a number of second and third-rate educational institutions, and re-organisation of the entire system of industrial and commercial education. In this last matter, practical suggestions made by persons actively engaged in industry and trade should prevail over theoretical proposals and empty formulae put forward by both radicals and bureaucrats.

### *Entrepreneurs*

Finally, we come to entrepreneurs—those who promote and manage industry. The supreme need of the country is for managers and foremen, for pioneers and entrepreneurs, and industrial planning by itself cannot fill in this gap. At the same time a carefully thought out scheme of planning may create an environment favourable to the rise of a better class of promoters and managers of industry. Up till now few of the wealthy men of this country have cared to invest their capital and energy in industrial concerns, but it is not inconceivable that as a result of the stimulus which must come when any sound scheme of industrial development is put in operation, many persons, hitherto shy and apathetic, would like to

put in their money, and also try their ability, in industry. Of course, a number of measures will have to be taken to secure better efficiency and honesty in management. The new Indian Companies' Act may have to be still further amended ; it may become necessary to set up some form of a Board of National Investment to overcome the shyness of investors and to bridge the gulf between the investigation and promotion of a proposition, and its finance ; it may even become necessary to send potential entrepreneurs abroad to get experience in the practical management of shops and factories and in the standards and requirements of markets. What precise steps should be taken it is for the planner to say, but this much is certain that the problems of industrial management and industrial leadership will have to be tackled no less seriously than the problems of raw materials, capital and labour.



## CHAPTER IX

### INDUSTRIAL PROMOTION AND INDUSTRIAL MANAGEMENT.

#### *An Historical Retrospect*

Any scheme for the development of new industries and expansion of old ones has eventually to be translated into reality with the help of industrial promoters and managers. A study of the various aspects of industrial promotion and industrial management is, therefore, extremely important. This is particularly so in India where so far the best brains have not been sufficiently attracted to industry and trade.

The history of the growth of industries in this country shows that they have owed their development primarily to two classes of people : British merchants who had come out to represent British trading firms, and the cotton merchants of Bombay and, lately, of Ahmedabad and other centres. "Industrial advancement in India was in the early days in the hands of men who were keen businessmen and technical experts." Being primarily merchants, they took to only such lines of business where the chances of making mistakes were comparatively small. "From one industry they turned to another not only because the experience gained in the one was equally valuable in the other, so that all they

needed was to get experts versed in the technique of each industry, but also because each line of business opened the way for another, and the market for the products of one line of business was found in another." The whole task of pioneering, promoting and managing mills and factories thus fell on the shoulders of a few merchants and, later, to this was added the additional task of financing them, particularly in areas like Bombay and Ahmedabad. Industrial enterprise in India thus came to be dominated by groups of so-called managing agents or managing agency firms.\* "The rise of the managing agents was due to the fact that they fulfilled the role of promoters and pioneers in many of the newly established industries in India; they came into prominence because it was they and they alone who could supply a regular stream of trained and efficient managers; and they gathered power as they found that the capital market was notoriously shy, and that industry looked to them for financial aid, both direct and indirect. The continuance and prevalence of the managing agency system in industrial enterprise in India has been due more to this last factor than to any other. Banks were not prepared to finance the long-term needs of industry, and were unable to provide anything better than 'circulating' capital and even that for

\* For a detailed survey, see P. S. Lokanathan: *Industrial Organisation in India* (London, 1935).

short periods; on the other hand, many of the enterprises were undercapitalised at the very outset and needed adequate financial assistance or guarantee at every stage of their activity. So the managing agency system came to dominate Indian industry.” \*

### *Services Performed by Managing Agents*

This unique phenomenon of mills, factories, mines and plantations being promoted and managed by a few groups of individuals or firms has had important repercussions on industrial enterprise in India. In a sense, managing agents have performed services which issue houses have done in other countries. “The name of the managing agent was in itself a guarantee to the public of the soundness of the enterprise in which he was interested, and the absence of it in a public issue a presumption of its untrustworthiness. In this way the public came more and more to argue that they were not to risk their capital in ventures not backed by one of the well-known agency firms. A great deal of waste was thus avoided.” Secondly, as the interests of managing agents were linked up with the future prosperity of the concerns they had started, they were anxious to make every effort to bring them to a successful conclusion. “The close association of ownership and control resulted in a unity of aim and motive, and the

\* N. Das: *Industrial Enterprise in India* (London, 1936).

common defects of joint-stock enterprise arising from diffused authority were obviated by a system in which managing agents were able to work with a single-minded purpose and free from the shackles of control by a Board of Directors." Thirdly, by themselves nursing industrial enterprises in the initial stages and throwing the capital open to public subscription only when the concerns had proved a success, managing agents helped to bridge the gulf between the sources of demand for capital and the sources of its supply.

### *Drawbacks of the Managing Agency System*

In course of time, however, the system came to be associated with a considerable amount of inefficiency and even laziness and fraud. The very dominance of managing agents \* in the sphere of industrial activity gave to the more unscrupulous amongst them opportunities for dishonesty.

\* This dominance has been due to certain special circumstances. Firstly, in many industries, managing agents themselves or their friends had, and still have, holdings of substantial blocks of shares. Secondly, control has been secured by managing agents as the principal creditors (or guarantors of credit) of the companies managed. Thirdly, even when managing agents did not hold any substantial percentage of shares, they were assured of control because the majority of shareholders, being distributed over long distances, were unable to unite effectively against their dictatorial management. Fourthly, although the managing agency system had been in existence in India for well over 70 or 80 years, the Indian law relating to companies never statutorily recognised them or curtailed their activities until the year 1936, and consequently unscrupulous agents could easily do a lot of mischief without actually transgressing the law. Finally, managing agents secured enormous control by means of their written agreements.

With the help of agreements, frequently non-terminable, managing agents could elect themselves to be the non-changeable, non-removable and permanent secretaries, treasurers and agents of the companies they managed. They could also eke out for themselves a number of extra allowances besides the commission to which they were strictly entitled under their agreements. The device of having to pay compensation to the managing agent, if and when the business of a company was transferred during the pendency of an agreement to another party, also put a premium on inefficiency and dishonesty. In not a few cases winding up took place in consequence of mismanagement by the managing agent, unprofitable trading conditions or the deliberate action of the managing agent himself. In most of these cases managing agents did not care to discharge their duties as managers faithfully and efficiently because they know they were 'insured' by the compensation clause. The practices of getting supplementary or secret profits, of assignment of functions and interests, of inter-investment of funds and of having several companies under the same management led to such abuses that the State was compelled to pass a comprehensive Indian Companies' Act in the year 1936. \*

\* For a detailed account of these and other practices and of the economic significance of the provisions of the new Indian Companies'

*The New Indian Companies' Act and the Problem of Industrial Enterprise*

This new Act has laid down a number of novel provisions regarding managing agents, directors and shareholders and we may briefly note here what their repercussions are likely to be on industrial enterprise in this country. The new rules and regulations will certainly not kill the managing agency system ; on the other hand, it will lead to a better standard of conduct among all managing agents. The limitations on the powers of agents and directors also will help better conduct of business and will give some protection to shareholders against the autocracy of the management. But the Act by itself will not certainly solve the problems of industrial management. Firstly, it is necessary that those who manage a company, whether they are managing agents, managing directors or a Board of Directors, must try to be more efficient and honest than they have hitherto been. Secondly, the ever-increasing body of shareholders and investors must begin to take an intelligent interest in the affairs of the concerns in which they have put in their money, so that it may become increasingly difficult for the management to remain inefficient, lazy or dishonest. No amount of legislation can ensure either of these two pre-requisites,

Act, the reader is referred to Chapters IV and VI of the writer's *Industrial Enterprise in India* (London, 1938).

*The Rise of a New Class of Entrepreneurs*

An encouraging sign of the day is the rise of new class of entrepreneurs—persons who do not necessarily belong to old managing agency firms. This is particularly noticeable in new industries like sugar, cement, paper, chemicals and match. In an ever-increasing number entrepreneurs unconnected with managing agency firms are starting new undertakings, although in view of the almost morbid faith that people still have in enterprises controlled and managed by managing agents, they sometimes band themselves in *ad hoc* firms of agents. Of course there is a danger that these entrepreneurs may try to do things rather too fast and without careful planning and forethought, and may ultimately bring ruin upon themselves and shareholders, but the very fact that a new class of entrepreneurs have been able to rise notwithstanding the dominance of managing agents over the entire field of industrial activity should give the industrial planner food for thought. It would appear that if India launched a comprehensive scheme of industrial reconstruction to-day, there would be less dearth of entrepreneurs, promoters and managers now than, say, twenty years ago. Even so, caution would be needed, because in the history of industrialism in India is recorded a large number of company failures, a subject which should now engage our attention.

## CHAPTER X

### COMPANY FAILURES.

#### *Introductory*

Company failures in India must cause grave anxiety and concern to the industrial planner. Although ever since the end of the last War, the number of joint-stock companies at work in India has steadily increased, the increase has by no means been phenomenal and, as a matter of fact, the average paid-up capital has remained more or less stationary. On the other hand, the figure of company failures is quite impressive and it has been found that, on an average, more than half of the companies newly registered every year fail. As a matter of fact, during the years 1924 to 1937, less than 10,500 new companies were registered, but during the same period nearly 5,500 companies (old and new) failed.

#### *Causes of Company Failures*

An analysis of the causes of company failures in India reveals that while lack of experience and technical knowledge or lack of capital has been responsible for many casualties, casualties due to dishonesty and planned attempts of designing persons to exploit the public have not also been



few.\* The old Company law had left several loopholes for unscrupulous promoters, and shareholders had no protection against their actions unless those were found to be within the orbit of criminal breach of trust. On the other hand, very often *bona fide* floatations launched with the best of intentions and enthusiasm have come to grief because their prospects and possibilities had not been carefully scrutinised.

In one way in particular the old law connived at a kind of incompetence. The determination of the minimum capital with which to start business had been left practically to the discretion of promoters, subject only to the condition that the certificate for commencement of business should be issued only on prior realisation of 5 per cent of the subscribed capital as the application money. This percentage very often proved far too short of the capital required even for the acquisition of land and the construction of buildings and factory and so the provision failed to afford any assurance that the company had attained the actual working stage. Numerous cases occurred in which, despite serious efforts to procure sufficient funds by disposing of its shares, a company failed to secure any substantial amount in excess of the statutory minimum, with the result that it had to be closed down after the little money

\* Report on the Growth of Joint-Stock Companies in Bengal (Calcutta, 1939).

collected had been spent in sundry preliminary expenses. The new Indian Companies' Act includes important provisions on this aspect of company promotion and it is hoped that they will check the further growth of mushroom companies and thereby diminish the number of company failures.

### *Facts behind Company Failures*

Figures of repeated company failures in India point to the crucial fact that the root causes of these failures lie in the character and conduct of the industrial promoter and industrial manager in India. Both promotion and management require considerable skill, experience and honesty, and it is a fact that in India to-day there is not an adequate number of first class promoters and managers. This must, therefore, put a certain amount of brake on the enthusiasm of the industrial planner, because after all schemes of industrial development have to be executed through efficient and honest promoters and managers. It is easy to lay down schemes ; it is exceedingly difficult to translate them into reality.

## CHAPTER XI

### OTHER PROBLEMS OF INDUSTRIAL PLANNING.

#### *Introductory*

So far we have considered the more important factors of industrial development, viz., raw materials, capital, labour, entrepreneurs, experts and skilled workers, but it will be a mistake to suppose that the pace or intensity of industrial production is not affected by any other factors. Industrialisation is, in a sense, a complex process in which a number of facts and circumstances contribute their quota and no industrial planner can afford to minimise or ignore the part played by any of them.

#### *The Problem of Power*

We may take the question of power first. Until recently, most industries in India have obtained their power from sources other than electricity, partly because electricity is not cheap enough and partly as a result of a certain amount of inertia and conservatism. But it must be obvious to any planner that old, inefficient methods of heat and power production with all their attendant wastes and inconveniences are no longer tolerated by any industrial nation in the world. Electricity as a source of power can be, and in

certain areas certainly is, cheaper and more efficient, but this point appears to have been conveniently overlooked by all industrial experts in India. The electrification of industry, however, involves wide and far-reaching issues: electricity may be obtained not merely from coal, but also from other materials, e.g., water; an analysis of the economics of various methods of power production is necessary; the possibilities of a further demand for electricity for non-industrial purposes should be explored; and, finally, the question whether the supply of power from electricity should be a State or private enterprise or both has to be squarely faced.

### *The Question of Protective Tariffs*

Next to power is the question of protective tariffs. So much has been said about the merits and drawbacks of protection that it will be superfluous to enter into that discussion again. Opinion in India is definitely in favour of protection, and the question now is how best protection can be granted. Should India adhere to the principles and conditions of discriminating protection laid down by the Indian Fiscal Commission of 1921-22 or should she enter into the method of bilateral agreements with countries with whom she normally trades? Are protective customs duties enough or must some industries have direct financial aid from the State in the shape of a direct

subsidy or bounty or a guarantee of purchase of a minimum quantity of output at fixed prices? These and similar questions cannot be shelved by the industrial planner, as the progress of an industry may virtually depend on how these questions are answered and policy is framed.

### *Transport Rates in India*

The question of transport rates is also no less important. It has been a long-standing grievance of industrialists in India that railway rates here are based solely on considerations of pecuniary advantage to the railways. The unfairness of rates on indigenous manufactures and on raw materials for industrial products has been vigorously criticised on the platform and the press from time to time and the explanation of railway authorities that rates are governed by the principle of what the traffic can bear has not satisfied intelligent public opinion in this country. The industrial planner has to examine this question with special reference to the needs of industry and say how far the railway rates policy now pursued by the railways requires modification.

### *Industrial Decentralisation*

Then there is the question of industrial decentralisation. If all the industrial establishments at work in India to-day could be conveniently plotted on a map, it would be seen that they are

mostly located in a few well-defined areas and that vast stretches of the country are without any industrial units at all.\* Now, the location of industry in a particular area depends on a number of factors, natural as well as functional, and one cannot obviously dictate that an industry should grow up in this or that locality. At the same time it cannot be denied that there is an uneconomic pressure on land in many districts in India and it is almost an economic necessity to stimulate development of industries in underdeveloped districts, not only to provide extra income to the people but also to relieve the pressure on land by switching off a section of the people to industrial channels. The industrial planner should consider whether new industries can be encouraged in the comparatively underdeveloped areas, with special reference not so much to the needs of those areas as to the question of costs. If certain areas possess comparative, or even equal, advantages with regard to, say, supply of raw materials, labour, power and market, there is no reason why these sites should not be preferred to overdeveloped areas for the starting of new industries.

\* A recent survey of industries in Bengal reveals the extraordinary congestion of factories in only four districts, viz., Hooghly, Calcutta, 24-Parganas and Howrah, accounting for more than 56½ per cent of the total factory establishment in the province and more than 82 per cent of the workers employed. Very similar things prevail in Bombay and the U. P. as well.

*Agriculture and Industry*

Closely allied to industrial decentralisation is the problem of striking a balance between the conflicting claims of agriculture and industry. It is almost a truism that there are more people on land than are really required for its thorough cultivation. To put a stop to the widespread unemployment and poverty of the classes dependent on land for their livelihood some withdrawal is undoubtedly necessary. Of the 352.8 million people of India only 30 millions live in urban areas and are dependent on industry, transport or trade for their livelihood. The number of actual workers in the various branches of industry, transport and trade is still less—only 23 millions.\* This glaring disparity must be modified: the country must divide its capital and labour between agriculture and industry in such a manner as to maximise the national dividend. How this should and can be done it is for the industrial planner to suggest.

\* *Review of the Trade of India, 1957-58* (New Delhi, 1958).

## CHAPTER XII

### COTTAGE INDUSTRIES AND INDUSTRIAL PLANNING.

#### *Introductory*

So long we have studied the problem of industrial development in India from the standpoint of large-scale industries alone—industries capable of producing goods on a vast scale and at cheap prices and of meeting a large market, both internal and external. But from time immemorial there have existed in India industries that are carried on in a modest manner in rural homes and cottage establishments and although some of them are to-day in a state of decay owing to foreign competition and the impact of machine-made goods, they still provide partial employment to a vast body of cultivators and full employment to an equally large body of artisans. Their importance in any scheme of national planning is, therefore, obvious.

#### *Large-scale Industries versus Cottage Industries*

In recent years there has been a certain conflict of industrial ideologies on this question of large-scale industries *versus* cottage industries. One school of thought has held that the only way in which the national dividend can be increased is by establishing large industries all over the



country in the manner in which this has been done in Great Britain, Germany and the U. S. A. The other school of thought has denounced large-scale industrialisation on the ground that "factory life is killing, that it prevents the worker from living a fuller life, that it imposes a heavy strain on his nerves and saps his physical life." \* Now a closer scrutiny would show that while there is an element of truth in the thoughts of both these schools, it is possible to evolve a scheme wherein both large-scale industries and small cottage industries can play their part. Even in the most advanced countries of the West, a number of small industries exist and flourish side by side with large-scale industries. For example, in France more than 99 per cent of the industrial establishments employ less than 100 workers each and of these again the great majority employ less than 50 workers each. Even in England, the home of large-scale industry, before the last War, in the majority of trades the number of employees per establishment was below twenty. In Japan, 60 per cent of the industrial population still gain their livelihood in a multitude of small undertakings employing not more than five workmen apiece. \*

\* For a brilliant exposition of these two ideologies, the reader is referred to the speech on "Industrialisation in India" delivered by the Hon'ble Mr. N. R. Sarker, Finance Minister, Bengal, in September, 1938, at Gwalior.

\* G. E. Hubbard : *Eastern Industrialisation and Its Effect on the West* (London, 1935).

liquidate fully either on account of their poor earnings or on account of excessive interest rates. Thus debts are piled on debts and, eventually, artisans become mere serfs working according to the dictates of *mahajans* and receiving only a meagre pittance for their labour. Moreover, these *mahajans* mostly deal with other goods and commodities of daily use, and workers are encouraged, nay compelled, to buy goods from their shops on credit. The result is that they have to pay higher prices and can never pay them fully. And thus obligations go on multiplying.\*

This chronic indebtedness of cottage industry workers and their difficulty in getting loans on fair terms must be squarely faced. It will be for the industrial planner to decide whether an extension of the Agricultural Debtors' Act which is in operation in most of the provinces in India would provide the best solution, or whether relief should be sought through the agency of co-operative credit societies. One thing, however, is clear. Mere liquidation of existing indebtedness will be no solution of the problem. Machinery must be set up whereby cottage industry workers may get loans on reasonable and fairly easy terms. The operation of the State Aid to Industries Act has been far too

\* *Report on the Survey of the Brass and Bell-Metal Industries in Bengal* (Calcutta, 1939).

rigid in most of the provinces and that Act alone will not be able to satisfy the financial requirements of cottage industries. Additional facilities must be provided and it should be possible for artisans and workers to borrow on the security of their tools and finished products.

### *The Problem of Marketing*

The other important difficulty under which cottage industry workers labour is in regard to the marketing of their finished products, owing to the fact that the market is often limited to their immediate neighbourhood. It is often stated that an internal market exists for artistic as well as non-artistic goods produced in cottage establishments, but there is no arrangement whereby these petty manufacturers can be brought in touch with this market. Cottage workers are often at a considerable disadvantage in not having an adequate knowledge of market conditions or of facilities for the proper distribution of their products. In many cases they go on making the same product in the same way as their ancestors have done and they consider it a nuisance to have to change their designs and patterns or to execute orders in consonance with the needs of modern fashion and dictates of modern taste. The middlemen through whom products are disposed of often have little experience of any but purely local markets and have

themselves to do business through other distributing agents.\*

One way in which the problem of marketing can be tackled is by the establishment of an emporium for products of cottage industries in the more important cities of a province. In this emporium products of local industries may be stocked, displayed and sold. Such an emporium would bring manufacturers in touch with merchants and consumers and establish that much needed liason which is now singularly absent. The Government Emporium in the Central Museum, Nagpur, and the Bengal Industrial Museum, Calcutta, have filled in this gap to a remarkable extent.

Emporiums or industrial museums by themselves would not, however, solve the problem of marketing. Local exhibitions of cottage industry products also help and so also do publicity arrangements, but the crux of the problem lies in the small manufacturers' inability to get in touch with consumers direct or at least through a distributing agency which would not present impossible terms. At present *mahajan* financiers do most of the marketing, either themselves or through friends, and having already put cottage industry workers under various obligations, they naturally see to it that the latter do not receive

\* *Annual Report of the Department of Industries, Madras, for the year 1937-38 (Madras, 1939).*

a fair price for their products. Any scheme of industrial planning must suggest ways and means of breaking this vicious circle and of bringing manufacturers in closer touch with the market.

### *The Problem of Productive Technique*

Thirdly, there is the problem of productive technique. In most cottage industries there is room for improvement of the productive methods. Improvements are called for in many directions—by the adoption of labour-saving devices, by the economisation of raw materials in manufacture and by the introduction of new designs and patterns so that new demands may be created and competition of goods from other sources eliminated. This is largely a work of research and experiment and many provinces have been doing valuable work in this direction for the last twenty years or so. What is necessary now is that the results of these researches and experiments should be made readily available to cottage industrialists. These researches and experiments should also be more practical than academic and should be conducted mainly with the object of improving the productive capacity of an industry. That a lot can be done in this direction becomes obvious as soon as a survey is made of existing industries.

*Cottage Industries and Industrial and Technical Education*

Finally, we may refer to the importance of industrial and technical education in any scheme of resuscitating cottage industries. The very conservatism and inertia of cottage workers demand that they should have some acquaintanceship with modern methods of production and should know how to adapt themselves to changed circumstances. "If conservatism and suspicion have to be removed, an intensive programme of industrial education has to be taken in hand."\* Industrial education can, however, become more a hindrance than a help if it be not adjusted to local needs—if the general poverty of cottage workers and their inability to make far-reaching and initially costly changes in the technique of production be not kept in view. A really sound scheme of industrial education for cottage workers is a supreme necessity in India to-day.

*Organisation of Cottage Industries in Japan*

In conclusion, a reference may be made to the excellent manner in which cottage industries are organised in Japan, the home of small manufacturers. "Primarily the small Japanese manufacturer has always catered for the domestic

\* *Annual Administration Report of the Department of Industries, Bengal, for the year 1937-38* (Calcutta, 1939).

market and the evolution which his business has now undergone in many directions has been forced upon him by a change in the character of local demand occasioned by the increasing diffusion of Western tastes and ideas throughout the country. A contributory factor has been the spread of electricity, which has enabled the small manufacturer, despite his lack of capital, to show a high degree of adaptability in the face of changing conditions while retaining the family organisation traditional to small-scale Japanese enterprise. The output of workshops formerly engaged in the manufacture of highly specialised goods for domestic consumption such as lanterns, umbrellas, sandals and so forth, now includes electric bulbs, bicycle parts, fountain pens, rubber shoes and many other articles. Such articles are not necessarily destined only for home consumption. Unlike the specifically Japanese goods which they tend to supersede, they are essentially suitable for export to other countries and this has incidentally opened up before the small producer entirely new areas of potential demand". The State has also come in and progress has already been made towards linking up the scattered forces of family industry by means of price agreements and centralised selling agencies. There is also increased co-ordination with existing branches of factory enterprise, a conspicuous example being the

bicycle industry, in which components are manufactured in small workshops on a contract basis and subsequently sent to the larger factories for assembly.\*

It should not be difficult for industrial planners here to evolve a scheme more or less on these lines, keeping of course in view the special circumstances of India.

\* G. E. Hubbard, *Eastern Industrialisation and Its Effect on the West* (London, 1935).



## CHAPTER XIII

### UNEMPLOYMENT AND INDUSTRIAL PLANNING.

#### *Acuteness of the Problem of Unemployment*

A point which has been rather inadequately stressed by both the National Planning Committee and the various Provincial Survey Committees is the help that industrial planning will eventually render in solving the problem of unemployment among the educated middle classes in India. Education in India has made enormous progress during the last quarter of a century, but this progress has had many undesirable features. The number of universities and scholars has increased by nearly 250 per cent and 600 per cent respectively during the past twenty-five years and in each of the provinces of Bengal, Bombay, Madras, U. P. and the Punjab a much larger percentage of the population is receiving university education than in England, and because this education here is hopelessly inefficient and cheap, young men get their degrees and diplomas rather too easily. After completing their college or university education, however, they find that few jobs are available and so, remaining unemployed, they swell the rank of a large body of idle or semi-idle intelligentsia who

have become unsuccessful in carving out a suitable career for themselves.

### *Industrial Development and Opportunities of Employment*

While the problem is mainly one of education,\* it cannot be denied that the traditional avenues of employment have been far too limited to absorb a sufficiently large number of these unemployed young men. In every country diverse opportunities of employment crop up when industrial development is stimulated and there

\* For a scathing, but unhappily too true, appraisal of the present situation, the reader is referred to H. R. Soni: *Indian Industry and Its Problems, Vol. I* (Calcutta, 1936). Says Dr. Soni: "When higher education is deplorably inefficient and cheap, it cannot fail to attract a large number of scholars who are too incompetent to benefit from a higher standard of instruction, or too poor to make their due contribution towards the maintenance of that standard. And that is precisely what has happened in India, with the result that universities are turning out graduates of all descriptions on mass production lines. With no avenues of employment, there has naturally been a slump in the market, and the value of a graduate's degree has rapidly declined in recent years ..... But in spite of this, the graduate-making process is proceeding more merrily than ever. New colleges and universities are springing up like mushrooms all over the country with the object, it seems, of rescuing the cast-off human material from the waste-paper baskets of the older institutions. The claim that they are designed to bring enlightenment to the benighted millions of India and that their founders are heroes and patriots, who exist only to serve the goddess of learning and their country, is a fraud and an imposture ..... If the problem of middle class unemployment is at all to be solved, Government will have to make a beginning towards that end by re-shaping its whole educational policy and by preventing the entire breed of adventurers and fame and power seekers from exploiting the gullibility and weakness of the people and from deliberately misguiding public opinion for their own selfish ends."

is no reason why the same shall not be the case in India as well. As a matter of fact, people in India have long emphasised the necessity for the development of industries on a big scale as a cure for unemployment.\*

*How Industrial Development May Help a Partial Solution of Unemployment*

Further industrial development would help a partial solution of the problem of unemployment in three ways. Firstly, the starting of new industries would stimulate a demand for educated men possessing technical and professional qualifications. As a matter of fact, the point was stressed by a number of scientists and educationists before the U. P. Unemployment Committee in 1935 that the development of 100 sugar factories in that province alone had given employment to 500 chemists, an equal number of engineers, a hundred experts in the line, a thousand clerks and storekeepers, besides about half a lakh of skilled workmen and unskilled labourers. It may, therefore, be reasonably hoped that further industrialisation along sound lines will solve the unemployment problem of a very large number of educated young men in this country.\*

\* *Report of the Unemployment Committee, United Provinces (Allahabad, 1936)*. It would be a mistake, however, to suppose that large-scale industrialisation alone will solve the problem of middle class

The second manner in which industrial development is likely to help educated but unemployed young men is by giving them facilities for running such cottage and small industries as do not require much capital. In Bengal, for instance, the Unemployment Relief Schemes of the Department of Industries provide industrial and technical training to unemployed young men in such subjects as umbrella-making, cutlery manufacture, shoe-making etc. and, after they have received their training, young men are encouraged and even helped to start small independent establishments of their own. In the preceding chapter we have noticed how cottage industries are linked with large-scale factory concerns in Japan. If cottage industries are organised in India in this Japanese fashion and the problems of marketing and finance successfully tackled, quite a decent proportion of the unemployed young men of this country may

unemployment. As has been pointed out by the Hon'ble Mr. N. R. Sarker (Finance Minister, Bengal) in his famous Gwalior speech, even the maximum amount of industrialisation cannot of itself solve this unemployment problem although it would help to relieve economic distress of the rural folk by enlarging opportunities of employment as also by stimulating demands for industrial raw materials. "The number of people actually employed in the various organised industries in India to-day", says Mr. Sarker, "is a little over 18 lakhs, which means that if it were possible to double existing factories and large scale establishments, we would hardly employ more than 36 lakhs of our countrymen out of a total number nearing 35 crores, of whom several crores must be under-employed or unemployed."

make a living by working as cottage manufacturers.

The third manner in which further industrial development will help unemployed young men is by opening up opportunities of employment as traders and middlemen. Any outburst of industrial activity is bound to create a demand for an additional number of traders and middlemen dealing both in raw materials and finished products, and quite a few unemployed young men may easily be absorbed in these channels. It may, however, be stressed here that in order that industrial expansion may be of some practical help to unemployed young men, they must acquire a new outlook on life and be prepared to work with their hands: jobs as clerks or storekeepers are extremely limited in industrial units (mills and factories) and the largest scope of employment lies in the sphere of workmen, operatives, supervisors and technical experts.

## CHAPTER XIV

### INDUSTRIAL AND TECHNICAL EDUCATION.

#### *Reasons Why Sound Industrial and Technical Education is Necessary*

The importance of the subject of industrial and technical education in any scheme of industrial planning can be hardly overemphasised. A sound system of industrial and technical education is necessary for three main reasons. Firstly, the technique of mechanised as well as cottage production involves a certain amount of skill and dexterity which can only be acquired by going through a systematic process of training. A batch of unskilled workmen cannot do the work of production and supervision as efficiently as a batch of workmen who have received good industrial and technical education. The proper training and supply of the human material are as necessary as a steady supply of raw materials and other factors of production. Secondly, it is only by undergoing regular industrial and technical training that middle class young men can secure employment in mills, factories, mines and plantations or set up their own industrial business. Thirdly, for the proper development of industries, it is

desirable that India should, as far as possible, be able to supply her own trained men to take charge of industrial work in various capacities rather than import experts from abroad and at a considerably high price. ^

*Defects of the Present System of Industrial and Technical Education*

It may be admitted at the very outset that the system of industrial and technical education has not yet been properly organised in India. Although well-intentioned but sporadic efforts have been made from time to time to adapt industrial and technical education to the needs of industry, the three objectives enumerated above have rarely been kept in view and a comprehensive plan drawn up accordingly. The Indian Industrial Commission which reported in the year 1918 of course decided certain questions of essential principles and urged the necessity of providing facilities for different standards of technical training for different types of industrial workers ranging from the common artisan to the highest mechanical or electrical engineer and technological expert,\* but it must be conceded that the recommendations of the Commission have been differently interpreted by the various provinces and, as a result, we now have in almost

\* For details, see *Report of the Indian Industrial Commission, 1916-18* (New Delhi, 1918).

every province a number of institutions professing to impart sound and practical industrial and technical training, but without any unity of purpose and also without proper co-ordination amongst themselves. In addition, a number of provinces have had their own "schemes", evolved, it appears, not with a view to translating the three main objectives of industrial and technical education into reality, but to meet certain special requirements. With the passage of years, each province has been inclined to attach a kind of sanctity to its own schemes and not infrequently the stubbornness of the Department of Industries in a province has stood in the way of a thorough overhaul of the existing system.

#### *An Evaluation from a Practical Point of View*

The utility of any system of education should be judged by results obtained. Measured by this standard, we may frankly admit that success has not been achieved in the matter of imparting industrial and technical education in this country. If we make a study of the employees engaged in various industries we find that very few of them possess that thorough training which may reasonably be expected of them. Although in every province there are a number of technical and industrial institutions seeking to impart specialised training in different branches of industrial activity, there is a singular



absence of co-operation between these institutions and industrialists, with the result that while these institutions go on imparting training according to their own pet ideas, industrialists and businessmen complain that persons who pass out of these institutions are practically useless as far as industry is concerned. Of course there are a few exceptions, but generally speaking it may be safely said that in India industrial and technical education has been considered a matter for the school alone : teachers and instructors possessing neither knowledge nor experience of the aims and needs of industry have usually been appointed to serve in technical and industrial institutions and no effective steps have been taken either to enlist the interest and co-operation of industrialists and businessmen or to ensure that the instruction given in vocational schools is appropriate and sufficient.\*

The same remarks apply, although to a lesser degree, to the training that is given to cottage industry workers. In almost all the provinces, there are a number of technical and/or industrial schools with courses of instruction on carpentry, weaving, cutlery manufacture and a number of similar subjects and every year quite a few crores of rupees are spent on such institutions. But it so

\* A. Abbott and S. H. Wood : *Report on Vocational Education in India* (New Delhi, 1937).

happens that rural artisans and cottage industry workers who are primarily to benefit from the instruction given in these schools rarely come to them. Although baits are thrown in the form of stipends, scholarships and free tuition and very low educational qualifications are prescribed for intending entrants, artisans rarely go to these schools (but they sometimes send their children), presumably because they do not find the training imparted to be of sufficient practical value. No wonder that when propagandists and demonstrators extol the virtues of these institutions, these hard-boiled artisans and cottage workers find it difficult to suppress their smile !

### *Industrial and Technical Education and Employment*

As regards the ability of existing industrial and technical institutions to give a thorough training to middle class young men and make them fit for employment in mills, factories, mines and plantations, it may be said that they have proved remarkably unsuccessful. Although passed students and apprentices of a few institutions find no difficulty in getting the necessary employment, in most of the institutions we find a repetition of the same process that may be witnessed in non-vocational institutions—the various high schools, colleges and universities. We see the strange spectacle of weaving institutes turning out

weavers, tanning institutes turning out tanners, sugar institutes turning out panmen in large numbers every year, but hardly twenty-five per cent of them getting jobs in cotton and jute mills, leather workshops or sugar factories, although these mills, workshops and factories employ hundreds and thousands of illiterate and untrained workers every year. It may be argued that mill and factory managers have got a bias against persons who pass out of existing industrial and technical institutions, but may it not be pertinently asked why they should have this bias? Mill and factory managers are chiefly interested in the efficiency of their workers and if persons who have passed out of existing industrial and technical institutions are really more efficient than illiterate and untrained workers, managers should feel tempted to employ the former in preference to the latter. Actually, the reverse is the case. Can an impartial observer help presuming that something must be very wrong with the instruction that is imparted in our technical and industrial institutions?

### *Industrial and Technical Education and Independent Business*

In the matter of encouraging young men to set up their own independent business also, our existing industrial and technical institutions have fared no better. Many of them profess to teach

young men the entire manufacturing and productive technique of some cottage and small-scale industries, and every year a large number of persons receive this training more or less at the expense of the State, but later on very few of them are seen to have set up independent businesses of their own. It is not the absence of capital that stands in their way, because some of these businesses do not require much capital and in others where some decent capital may be needed many of these young men are quite prepared to provide it; the difficulty lies in the fact that the courses of instruction that have been imparted have not been of a *practical* character nor have they been scientifically devised to enable students to set up their own independent business on a competitive basis. A survey of small businesses in every province reveals that most of them are still in the hands of illiterate and untrained craftsmen and that persons trained in industrial and technical institutions cut a very sorry figure when pitted against their untrained worker-competitors.

*Industrial and Technical Education Tackled so far in a Blind Fashion*

The conclusion is, therefore, irresistible that the problem of technical and industrial education also has so far been tackled in the same blind fashion as general education. Just as the State and the public have gone on with their merry game

of establishing more high schools, colleges and universities with the alleged objective of removing illiteracy and bringing the light of education within the easy reach of every household, so also they have gone on establishing new industrial and technical schools and expanding existing ones with the alleged objective of making the community industrially and commercially minded. The provinces have more or less vied with one another in this exciting game and the need for *sound* industrial and technical education in an industrially backward country like India has been conveniently overlooked.

### *A Thorough Overhaul is Necessary*

The need of the hour is, therefore, for a thorough overhaul of the existing system. To do this, the active support of industrialists and businessmen is essential. No false sense of prestige should prevent the State and the public from admitting that so long they have travelled in a wrong direction and that they mean to retrace their steps now. The actual organisation of industrial and technical education will always have to be left in the hands of experts, but let not these experts be fanatics : let them take a broad view of things ; let them measure any scheme of industrial and technical education against the extent to which the products of that education get a rightful place in life. We have had enough of education for its own sake :

let us have a little bit of education for the sake of those who receive it.

In what precise manner the present system of our industrial and technical education should be overhauled and re-organised it is for the industrial planner to say, but certain fundamental points may be remembered. This education must be *intensely practical*, i.e., it must be such as to enable trained persons to get readily absorbed in industry and trade. It must also help to increase their industrial efficiency and enable such of them as receive cottage industry training to set up independent business. Institutions that are established under this re-organisation scheme should have expert instructors who know not merely technique, but are conversant with manufacturing and marketing conditions as well. And, finally, in order that the essential unity in the purpose of general and vocational education (viz., to develop an immature child into a good citizen) may be maintained, each subject in the vocational school should have its origin in the non-vocational school : it should, in fact, be nothing more than an extension of it.

## CHAPTER XV

### CONCLUSION.

#### *Industrial Planning—An Attack on Many Fronts.*

We have come to the end of our analysis. We have seen that industrial planning is a complex affair involving simultaneous and comprehensive attack on many fronts and in this attack no front can be ignored or its importance belittled. Of course in the actual translation of plan into concrete shape certain things will have to come first and others afterwards, but the planner must not forget that for the evolution of an efficient and durable system, every little problem will eventually have to be tackled. And this is by no means an easy task.

#### *A Magic Word*

In this connexion we may utter a note of warning. The very phrase "industrial planning" is apt to make the ordinary man see visions of a great future and to hope that once a Commission or a Committee has suggested a plan, everything will follow smoothly and automatically. Such a hope is, however, an illusion which needs to be dispelled. Planning is a magic word—who would not plan?—but it may easily degenerate into a

fetish. Very often planning is a polite name for giving sectional advantages to particular industries or interests, and connotes nothing but socialism—central control of the means of production. While there may not be anything inherently wrong in economic socialism, the average man who is carried away by such pretty phrases as “national planning”, “an ordered society” or “socialisation of business” should be told what exactly industrial planning means and then be asked to say whether he desires it and, if so, in what form. It is a kind of intellectual dishonesty to camouflage the real objective of a plan under catching phrases and then ask the common man to give his verdict on it.

### *A Few Words of Caution*

A few words of caution are necessary also for those who think that industrial planning would mean prosperity for everybody and no economic loss to any section of society. If we accept the thesis that the main purpose of industrial policy is to promote economic efficiency, i.e., to increase income, output or satisfaction at the least cost, monetary, physical or real, we are confronted with the question as to how far an industrial plan would further this economic efficiency. The main categories of industrial policy consist in problems of industrial structure, of industrial functioning and

\* For a brilliant analysis of the economics of planning, the reader is referred to Lionel Robbins: *The Great Depression* (London, 1934).



administration, and of industrial or economic technique such as price-fixing or output restriction, and, in doing any of these things, consumers as a class are bound to suffer at least in the immediate future. \* In the U. S. A. the recent plans of President Roosevelt have had their negative features : the National Recovery Act raised costs and fostered monopoly ; the Agricultural Adjustment Act restricted output and subsidised immobility ; the Gold Policy attempted to raise prices by a method which increased the scarcity of gold and imposed the maximum inconvenience on the world at large. In India, too, we should be prepared for similar hardships which planning and restrictionism must entail. §

We should not also overlook the fact that a planned economy of any sort has to be planned from the centre and that the few persons there may well make mistakes. There are obvious dangers in giving plenary powers to a small group of persons and the interplay of economic forces once let loose by the activities of this group may do as much evil as good. It is necessary, therefore, that industrial planning should not involve too much of restrictionism or central control. The industrial planner should aim mainly at removing obstacles and in-

\* Cf. P. Sargent Florence's article on "Economic Research and Industrial Policy" in the *Economic Journal* (London) for December, 1937.

§ *Economic Journal* (London), December, 1934.

dicating facts of which advantage may be taken by entrepreneurs and managers of industry. The State should play the part of a co-ordinating and regulating agency rather than arrogate to itself the functions of an active entrepreneur.\*

### *Plans Should Be Practicable and Workable*

The fact is that with the onset of the last post-War depression we have had too many verbose documents on economic and industrial planning and very few of them provide a clear, unequivocal and a relatively well-defined basis of discussion. Let us hope that our industrial planners will guard against this tendency of becoming loquaciously vague about suggestions. Let the "plans" which will be put forward by them have the virtue of rational cohesion and clear thinking: let their "plans" have less of terminological or phraseological ornaments—let there be no atmosphere of lyrical unreality about what they recommend. A practicable and workable plan is all that is needed and it does not matter very much whether it is the realisation of a pre-conceived idea or a more or less incidental afterthought. For, carefully worked out, planned economy can, through its greater power to vary the income of the community, through its ability to further economic

\* This is precisely how the State has played its part in Japan. For a detailed study, the reader is referred to Mitsubishi Economic Research Bureau: *Japanese Trade and Industry* (London, 1936).

efficiency, and in general through the superiority of conscious reason over blind instinct in the achievement of any end whatsoever, be made into a far better economy than a *laissez faire* economy can ever hope to be.

## APPENDIX A

### BENGAL INDUSTRIAL SURVEY COMMITTEE.

#### A. Questionnaire for Key Industries.

##### I. CHEMICALS.

1. Could you give any estimate of the chemicals, both inorganic and organic, used for industrial purposes in Bengal? If so, please state the quantity and value of the more important items consumed during the last five years.

2. Which of the chemicals at present consumed by the industries of the province are imported from abroad, and which of them are locally manufactured and by whom? If any chemicals are partly imported and partly manufactured within the country, what are their respective proportions, qualities and prices?

3. If you are a consumer of chemicals, could you give an estimate of your annual requirements of the following items?

- (a) Zinc salt—(i) Zinc oxide, (ii) Zinc chloride.
- (b) Magnesium salt—(i) Magnesium sulphate, (ii) Magnesium chloride, (iii) Magnesium carbonate.
- (c) Sodium salt—(i) Soda ash, (ii) Caustic soda, (iii) Sodium sulphide, (iv) Sodium sulphite, (v) Sodium silicate.
- (d) Potassium salt—(i) Potassium chlorate, (ii) Potassium chloride, (iii) Caustic potash.
- (e) Manures—(i) Superphosphates, (ii) Sulphate of ammonia and other nitrogenous manures.
- (f) Chlorine and its products—(i) Chlorine, (ii) Bleaching powder, (iii) Hypochlorite.

4. Are you interested in any of the following chemicals? If so, please give an estimate of your annual consumption of—

- (a) Lead—(i) Litharge, (ii) Red lead, (iii) White lead.
- (b) Aluminium—(i) Aluminium sulphate, (ii) Alum, (iii) Alumina.
- (c) Iron—(i) Ferrous sulphate, (ii) Prussian blue.
- (d) Chromium—(i) Alkali bichromates, (ii) Chrome colours.

## INDUSTRIAL PLANNING : WHY AND HOW

(e) Copper—Copper sulphate.

(f) Other chemicals—(i) Sulphuric acid (dilute and concentrated),  
(ii) Calcium carbide, (iii) Glycerine.

5. Could you give an estimate of the annual consumption of chemicals used by you, in India and in Bengal, for industrial purposes? If the same chemical is used in several industries please give the estimate only in respect of the particular lines of industry in which you are interested.

6. In case the estimates of the consumption of chemicals in particular industries are not available, is there any standard proportion of the same to finished goods on which such estimates can be roughly worked out?

7. If you are engaged in the manufacture of chemicals, what are the lines you have taken up so far? For which of the raw materials used by you, is your industry entirely dependent on imports? Do you know of any other chemicals being manufactured within the country? If so, by whom, where and in what quantity are these being manufactured?

8. Do you obtain any bye-products in the process of manufacturing chemicals? If so, what use do you make of them? How are such bye-products utilised elsewhere? If you cannot make profitable use of the bye-products, what are the difficulties? If you could utilise the bye-products, how far would that help you to reduce the cost of the basic chemicals now manufactured by you?

9. Could you give any instances of chemicals, the manufacture of which was undertaken by particular firms but proved unsuccessful? If so, please state the names of firms and also the reasons of the failures.

10. Do you consider that Bengal offers special facilities for the manufacture of commercial chemicals hitherto not manufactured? If so, what are they? In replying please mention the differential advantages possessed by Bengal against other parts of India with special reference to (a) raw materials, (b) power, and (c) consuming markets.

11. In case you consider that the manufacture of any new chemicals can be successfully undertaken with proper assistance from the State, please state the names of such chemicals and also the particular forms of assistance required from the State. Also please give an estimate of the capital required (both block and working) for undertaking the manufacture of such chemicals on a commercial basis.

12. Do you consider that it is feasible to start the manufacture of artificial silk in Bengal? Will State aid be necessary? If so, in what form?

## APPENDIX A

13. Have you any further suggestions to make in connection with the development of the chemical industry in Bengal?

### II. METALS (NON-FERROUS).

1. Has there been any prospecting made by any firms regarding the deposits of metallic ores, (non-ferrous) containing Copper, Aluminium, Zinc, etc., in any part of Bengal? If so, could you furnish any details of such prospecting with special reference to the estimated volume of deposits? If the qualities were encouraging, what are the reasons that have prevented so far a commercial exploitation of such ore deposits? Have the prospects of such deposits been brought to the notice of the Geological Survey Department of India? If so, what was the record of their observations thereon?

2. What are the metals and alloys that are manufactured in Bengal at present? Please state the names of the manufacturing firms and also the total volume of their annual production.

3. If you are a manufacturer of any of the metals or alloys, where do you get your ores or basic materials from? In case the ore deposits are outside Bengal, what are the considerations that led you to manufacture the metals away from the deposits of ores?

4. For what metals do you consider Bengal offers most attractive manufacturing prospects having regard to the relative importance of ore deposits, power transport charges and availability of chemicals used?

5. Is bauxite imported into Calcutta for sale from any parts of India? If so, where does it come from and in what quantities per year? What are the prices at which Indian bauxite is sold in Calcutta as well as at the pit mouth?

6. What are your views about the prospects of manufacturing aluminium in any part of Bengal? If you do not consider the prospects to be encouraging enough, what are the reasons?

7. Do you consider it feasible to undertake the manufacture of alloys like brass and bronze and other industrial alloys on a commercial basis? If not, what are the difficulties?

8. Are you aware of any concrete instances in which attempts were made to manufacture particular metals or alloys in Bengal but proved unsuccessful? If so, what were the reasons of the failures?

9. Can you suggest any metals or alloys the manufacture of which can be induced by suitable Governmental assistance? If so, what are the measures of assistance required?

## III. MACHINERY.

1. Could you furnish a list of machines or machinery parts that are at present manufactured in Bengal? If you cannot give a comprehensive list please state as many items as are within your direct knowledge. Also please mention the names of manufacturing firms against the respective items including those who do only assembling of imported parts.

2. If you are a manufacturer, will you please state the particular types of machines or machinery parts which you have been manufacturing? What basic materials have you been using for your manufactures and where do you obtain your supply of materials from?

3. If you are a manufacturer, do you have to face the competition of imported goods? What are the respective qualities and prices of comparable imports and local manufactures? How much of your output is consumed within the province? To what extent are the requirements of the country supplied by you along with other Indian manufacturers in the line?

4. Have you any suggestions to make regarding any new types of machines or machinery parts the manufacture of which can be profitably undertaken in this province? If so, can you furnish any detailed schemes with particular reference to the supply of raw materials and estimates of capital required, both block and working?

5. Are you aware of any attempts made in the past by any firms for the manufacture of any new types of machine or machinery parts, which proved unsuccessful? If so, what were the reasons of the failures?

6. Do you consider that any engineering firms can be induced to take up the manufacture of any particular types of new machines or machinery parts if they are given suitable assistance by the State? If so, what are the machines or machinery parts that are likely to be taken up and by whom? What are the measures of assistance required? How much capital would be required for such undertakings, both block and working, and what would be the manufacturing capacity?

7. Can you suggest any detailed scheme for the manufacture of prime movers in Bengal, e.g., steam engines, internal combustion engines, electric motors, dynamos, etc.? Will State help be necessary? If so, in what form?

## IV. COAL AND BYE-PRODUCTS.

1. Could you give the names of firms in Bengal that have been distilling coal at present and recovering the following bye-products: (a) coal gas, (b) ammoniacal liquor, (c) coal tar? If so, please give an estimate of their annual production and state where and for what industrial purposes the same are used.

2. If you are interested in the commercial production of gas only from coal, what is your monthly and annual accumulation of tar and what use do you make thereof?

3. Could you give any estimate of the annual requirements of tar in India and Bengal? What are the usual markets where it is consumed? To what extent are these requirements met by the supply of tar manufactured respectively in Bengal and outside?

4. If the indigenous production of tar is not expanding adequately, what are the reasons?

5. What are your views about the possibilities of commercial production of the following articles obtained by the distillation of coal: (a) benzene, (b) toluene, (c) phenol and cresols, (d) naphthalene and anthracene, for the ultimate manufacture of coal-tar, dyes and drugs? Please state your views with special reference to the present consumption and production (if any) of the aforementioned chemicals, the problem of foreign competition and also localities best suited to the manufacture thereof.

Please state your views with special reference to the present consumption and production (if any) of the aforementioned chemicals, the problem of foreign competition and also localities best suited to the manufacture thereof.

6. If you consider the production of any of the coal bye-products stated in the foregoing question to have very good commercial prospects, have you any specific scheme to suggest in connection therewith? If so, please give estimates of capital required, both block and working, as well as of annual production and approximate earnings.

7. Are you aware of any attempts made in the past for manufacturing any of the coal bye-products stated in question No. 5 which proved unsuccessful? If so, please state the reasons of the past failures.

8. Do you consider it necessary to set up model plants for the hydrogenation of Indian coal and of fuel gases with the object of preparing liquid hydrocarbons?

9. Can the coal industry be persuaded to adopt any constructive measures for the better utilisation of coal? Is State help necessary



## INDUSTRIAL PLANNING : WHY AND HOW

for achieving this objective? If so, what forms of assistance are required from the State? Do you consider that any restrictive legislation will be helpful towards that end?

### B. Questionnaire for Medium-sized Industries.

1. Name of the industry.
2. Organisation of the industry in Bengal—
  - (a) Joint-stock company—(i) capital, (ii) productive capacity, (iii) actual production (quantity and value).
  - (b) Partnership or single proprietary concern—(i) capital, (ii) productive capacity, (iii) actual production (quantity and value).
3. Location and distribution of the industry—(a) in India; (b) in Bengal.
4. Estimated capital investment—(a) in India; (b) in Bengal.
5. Labour employed by the industry in Bengal—(a) Bengalee; (b) imported from other provinces.
6. Rates of wages of operatives engaged in the industry—(a) in Bengal; (b) in other provinces.
7. Raw materials used by the local industry and their proportionate costs.
8. Sources of raw materials—(a) within Bengal; (b) outside Bengal; (c) foreign.
9. Proportionate costs of imported and indigenous raw materials used.
10. Incidence of import duty on foreign raw materials used.
11. Comparative advantages and disadvantages in respect of indigenous raw materials, if there is competition with Indian factories situated outside Bengal, regarding (a) availability, (b) quality, (c) price.
12. Volume and value of annual production—(a) in Bengal; (b) in India.
13. Estimate of the cost of production (exclusive of depreciation and profits).
14. Average prices obtained (per unit of different types of products).
15. Value of import into—(a) India; (b) Bengal (both from abroad and other provinces).

16. A. Whether the article is produced (a) for consumption in Bengal, (b) for export to other provinces, (c) for export outside India.

B. Proportion of the local production exported to other provinces and abroad.

17. Prevailing c.i.f. prices of imports (or selling prices, if c.i.f. prices are not available).

18. Existing markets and marketing arrangements.

19. Incidence of transport charges on raw materials and finished goods.

20. Difficulties experienced by the industry—(a) technical, (b) marketing, (c) financial (with special reference to the State Aid to Industries Act), (d) regarding labour supply and efficiency, (e) regarding labour legislation and factory rules, (f) otherwise.

21. Assistance received from Government, if any, and suggestions for further assistance.

22. Any other remarks.

### C. Small and Cottage Industries.

#### I. NATURE AND STATUS.

1. Name of the industry.

2. Place where situated (district, subdivision, village).

3. Name and status of the cottage industry worker, whether—(a) employer, (b) independent worker, (c) worker on contract, (d) wage earner.

4. If employer, the number employed daily—(a) members of the family; (b) hired labour (both in brisk and slack seasons, if any); (c) apprentices (if any).

5. If independent worker, daily employment of—(a) members of the family; (b) hired labour (in brisk and slack seasons respectively).

6. If worker on contract—(a) terms of the contract regarding piecework or finished goods, delivery conditions, etc.; (b) members of the family employed; (c) hired labour employed daily (in brisk and slack seasons respectively).

7. If a wage earner—(a) processes of manufacture engaged in; (b) period of employment, daily (hours) and during the year (days).

#### II. RAW MATERIAL SUPPLY.

1. Kinds of raw materials used.

2. Sources of the raw materials, indigenous or foreign.

3. Monthly and annual consumption of raw materials--  
(a) quantity; (b) value. •
4. Parties from whom the raw materials are purchased--  
(a) If purchased from local merchants, the price thereof;  
(b) If imported from elsewhere in the country, the price at the source and the cost of transport.
5. Periodical variations in the availability, consumption and prices of raw materials, if any.
6. Terms of purchasing the raw materials, by cash or by credit, and the period covered by the latter.
7. Credit requirements in the purchase of raw materials and the available sources of credit and also the terms thereof.
8. Difference, if any, between credit prices and cash prices.
9. Conditions attached to the purchase of raw materials, if any, such as that the finished goods should be delivered to the supplier of raw materials, and the like.

## III. PROCESSING EQUIPMENTS.

1. Machinery, tools and appliances used--(a) value; (b) durability (life--number of months or years); (c) annual maintenance cost.
  2. (a) The amount of capital required, both block and working;  
(b) Whether capital is borrowed or owned.
- If it is partly owned and partly borrowed, the respective proportions of borrowed and owned capital.
3. If capital is borrowed--(a) parties from whom it is borrowed;  
(b) terms of borrowing; (c) method of repayment.
  4. Whether there are any difficulties in the adoption of improved appliances, and, if so, what are they?

## IV. PRODUCTION AND PRICES.

1. Types of goods produced.
2. Estimated production of each type per month and per year--  
(a) volume; (b) value.
3. Capacity for production of each type per day on the basis of usual working hours (mention number of hours).
4. Is the industry seasonal? If so, why?
5. Relative durability of brisk and slack seasons in the industry and the comparative variation in the brisk and slack season productions.

6. Subsidiary occupation, if any, during slack seasons and the income therefrom.

7. Whether the goods are produced against order or for market? If for both, the respective proportions thereof.

8. If the goods are produced against order, where are the orders secured from?

9. Have any new types or patterns been devised in the particular lines of production? If so, how far have these been adopted?

10. Has the output of the industry been falling off in recent years? If so, to what extent? (Figures may be given for the last 5 years).

#### V. MARKETING.

1. The usual markets for the goods produced—(a) local, (b) district, (c) provincial, (d) outside the province, (e) foreign.

If the goods are sold in more than one market, the relative importance of each.

2. Are the goods sold direct or through agents? The commission allowed to agents, if any.

3. The terms on which the goods are sold—(a) cash, (b) credit, (c) hypothecation.

4. If the goods are sold on credit, the terms and period of such credit.

5. If the goods are hypothecated, the parties to and conditions on which the same are hypothecated.

6. The difference between cash and credit prices of goods sold to middlemen and the prices obtained in consuming markets.

7. Is there any co-operative organisation in the particular line of the industry? If so, what benefits have the members been getting from it? If not, are the people engaged in the industry favourably inclined to it?

8. Is there any competition which goods produced by the industry have to face? Are such competitive goods machine made? If so, are they indigenous or foreign? (State the quality and prices of the competitive goods.)

9. What form of assistance is required from the Government to withstand competition?

10. Has there been any fluctuation in the prices of goods turned out by the industry in recent years? If so, why and to what extent? (Figures may be given for the last 5 years.)

## INDUSTRIAL PLANNING : WHY AND HOW

### VI. FINANCE AND CREDIT.

1. What are the financial requirements of the industry—(a) for tools and appliances, (b) for raw materials, (c) for marketing, (d) for other purposes?

2. What is the average annual return obtained on capital invested in the industry after payment of wages on hired labour and interest charges?

3. Are those engaged in the industry indebted? If so, to what extent and to whom are they indebted?

4. Do those engaged in the industry find any difficulty in obtaining loans? If so, what are they?

### VII. EMPLOYMENT OF LABOUR AND WAGES.

1. Number of outside workers employed in the industry (to be classified by age and sex, both in brisk and slack seasons).

2. Daily hours of work for each class of workers.

3. Daily rates of wages paid to each class of workers.

4. Steadiness or otherwise in the supply of workers.

### VIII. MISCELLANEOUS.

1. Is there any estimate available of the total volume and value of the output of the industry for the entire province?

2. Is there any estimate of the total number of persons engaged in the industry throughout the province? If so, what are the respective numbers of jobbers, independent artisans and wage-earners?

3. Any other suggestions with regard to the possibilities of giving an impetus to the industry?

### D. Questionnaire on Industrial Finance.

#### PART I

1. With regard to the industrial companies which have been brought into existence but have not yet reached the working stage on account of insufficiency of capital or other reasons, have you noticed any characteristic difficulties and problems which you may specially mention? If so, please give an idea of the nature of such difficulties and problems with reference to the number of companies involved, their reactions on the general industrial outlook, etc.

2. Do you consider that the latest amendment of the Indian Companies Act with a view to prevent the growth of unsound and

mushroom companies is quite adequate for the purpose? If not, please give your suggestions, if any, with particular reference to the conditions prevalent in Bengal.

3. Do you consider that any assistance from Government is likely to be helpful to the promotion of industrial companies in the Province? If so, what forms would you suggest? Has Government assistance in any other provinces in India been productive of appreciable results? If so, please give particulars.

4. Do you consider that the ideas of the public about the efficacy and utility of joint-stock finance for the purpose of industrial development have undergone a change in recent years? Please give your considered views with reference to the latest amendment of the Indian Companies Act with regard to the position and function of Managing Agents.

5. Have you any suggestions to make for popularising joint-stock finance among the public in this province?

## PART II

1. What are the credit facilities that are at present available to the large and medium-sized industries in Bengal from the existing banks? What are the usual rates charged and how are these related to the (a) standing of the borrowers, (b) periods of the loans, (c) securities offered and (d) the location of factories in and outside Calcutta?

2. Do the banks receive any considerable volume of requests for loans from industrial concerns against their block? To what extent are such companies accommodated by the existing banks and at what rates? In cases where the applications are not entertained by banks where do the applicants obtain their necessary loans from and at what rates?

3. Has any change occurred in recent years in the investment policy of the banks in regard to industrial companies owing to such factors as continued dullness of the money-market and the development of a keen competition between the smaller banks of the Province? If so, please explain the nature of the changes that have taken place.

4. The Central Banking Enquiry Committee recommended the establishment of a specialized type of Credit Corporation for meeting financial requirements of large and medium-sized industries with the definite object of promoting industrial development. Do you support this view? If so, please give your considered views on the following points:—

- (i) Whether the present may be regarded as an opportune time for undertaking the establishment of the proposed Corporation?

- (ii) What should be the organization of the Corporation and its sphere of business?
- (iii) What should be the minimum share-capital of the Corporation and from what other sources should it obtain its necessary finance?
- (iv) What rates should be charged on its investments?
- (v) What should be its cost of management and minimum turnover to ensure a profitable working?

5. In case you do not consider the immediate prospects to be encouraging enough for the launching of an Industrial Credit Corporation, do you consider that the outlook would be appreciably changed in favour of it by the grant of some sort of Government assistance to the proposed Corporation, such as a Government guarantee on either its shares or debentures? If so, please explain the implications of the grant of such assistance with reference to available business and the prospects of the profitable working of the proposed Corporation.

6. Have you any others suggestions to make for meeting the financial requirements of the industrial concerns of this province, both existing and potential?

## PART III

### I. RE: SALE OF SHARES

1. Does the expansion of the share-market in Bengal in recent years signify an increased popularity of investment in shares in the sense of bringing in the shares of new companies (not previously quoted) within their scope and attracting a larger body of genuine investors within the Province? If so, what sections of the community are being attracted most by the market?

2. How do the industrial companies in Bengal (except Tea, Jute, Coal and Iron & Steel) fare in the total volume of business of the local share-market? Are these receiving support on a progressive scale? If not, why not?

3. What are the tests that determine the acceptability of the share of any particular company for quotation in the local share-market?

4. Has the agricultural depression and the subsequent insecurity of investment against mortgage of land had any perceptible reaction on the share-market? If so, how and to what extent?

5. Against the existing economic background of this Province what are the conditions which, you think, must be satisfied by an industrial company for obtaining effective support from the investing public and particularly from the share-market?

6. Do you consider that any assistance from Government (e.g., the guarantee of a minimum dividend for a limited period) would by itself make the shares of industrial companies sufficiently attractive to investors? If so, what specific forms of assistance would you suggest? Has any of the forms of assistance proposed by you been tried anywhere in India? If so, with what results?

7. If the capital requirements of the industrial companies which have not reached the profit-earning stage cannot be supplied by the share-market what alternative measures would you suggest for meeting the situation? Would you support the establishment of any special industrial credit machinery for the purpose? If so, what should be its structure and functions?

## II. RE: UNDERWRITING OF SHARES.

1. To what extent is the practice of underwriting of shares in vogue in Bengal? Is it growing in popularity in recent years?

2. Do the new floatations that have benefited by this practice during the last ten years include any of the industrial companies in Bengal (exclusive of Jute, Tea, Coal and Iron & Steel)? If so, please give particulars of the companies and the nature of the underwriting business.

3. Who are the parties by whom shares are generally underwritten? Are they in any way connected with the companies of which they act as underwriters?

4. What are the tests which guide underwriters in selecting particular companies? How do these apply to industrial companies floated in Bengal (exclusive of Jute, Tea, Coal and Iron & Steel)?

5. What are your views about the prospects of underwriting business as an effective means of promoting joint-stock companies in Bengal provided certain special privileges are conferred on them by Government? What privileges are required for the purpose? If you do not consider the prospects to be encouraging enough, what are the reasons?

6. Can you suggest any other methods by which underwriting business can be made to play a more effective role in the promotion of industrial companies in Bengal?

## III. RE: ISSUE OF DEBENTURES.

1. What are your views about the success or otherwise of issues of debentures by industrial companies in Bengal? If any of them have obtained satisfactory results, do you attribute the same to any special advantages of the companies concerned? If so, what are they?



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2. Do you consider that the success of debenture issues has any essential connection with the profit earnings of an industrial company even apart from the value of its assets? How far does any difference in this regard affect the rate?

3. To what extent can the practice of issuing debentures be relied upon in Bengal for meeting the financial requirements of industrial companies, both existing and potential?

4. Could you suggest any methods by which the issue of debentures by industrial companies in Bengal may be popularized on a more extensive scale?

## E. Questionnaire on Co-operative Finance of Industries.

1. How far are the financial requirements of the cottage industries of this province being met at present by the co-operative organizations? Specific details may kindly be furnished in this connection for—

- (i) the industries for which co-operative unions have been started so far;
- (ii) the number of industrial unions working in connection with different kinds of cottage industries, district by district;
- (iii) the number of cottage industry workers served in each district by the industrial unions and the distribution thereof under specific cottage industries;
- (iv) total amount of industrial loans advanced by the industrial unions to their respective constituents, industry by industry, in each district;
- (v) the value of different kinds of cottage industry products sold through co-operative unions, district by district.

2. It appears from various official reports that the cottage industry workers of this province will have yet for years to depend very largely on money-lenders, as the gaps created by any scheme of eliminating them altogether cannot be filled up by co-operative organizations before the lapse of many years. Do you endorse this view?

3. Do you consider that the problem of industrial finance, in so far as cottage industries are concerned, is very intimately linked with the problem of marketing the finished products of such industries, and that no effective attack on the former can be made without making adequate provisions for the latter also? Is this inter-relation kept in view in promoting the co-operative industrial organizations of this province? If so, what actions have been taken so far to ensure the desired results?

4. How far do the requirements of cottage industry workers for loans arise from their necessity of purchasing raw materials and delayed sale of finished products? Do you consider that if the cottage workers were supplied with the necessary raw materials on credit and provided with facilities for immediate disposal of the finished products, they would be spared the necessity of taking loans in cash? If so, how far would it be feasible for the co-operative organization to provide these two facilities to cottage industry workers?

5. What new facilities are required for giving an impetus to the expansion of co-operative industrial unions in this Province? Please give your considered views with reference to the past experience of the existing unions.

#### F. Questionnaire on Technical and Industrial Education.

1. It is considered that co-operation between business and education is essential for the successful and economic working of any scheme of vocational education and for ensuring that the instruction shall be both appropriate and sufficient. Do you agree with this view?

2. Kindly state the average number of annual vacancies in the supervisory grade in your industrial establishments.

3. What type of men and with what standard of education and training do you require for posts in the supervisory grade?

4. In making appointments to such posts, is it your practice to take in entirely untrained hands and make them pass through a period of apprenticeship at your own cost? Do you find such arrangements to be convenient and satisfactory? Kindly state the method you follow in filling up these posts.

5. To what extent have your demands for filling up these posts been met by the existing technical institutions of the province, such as the Calcutta Technical School, the Bengal Textile Institute at Serampore (formerly known as the Government Weaving Institute), the Jadavpur College of Engineering and Technology, the Calcutta Engineering College, University Departments of Applied Chemistry and Physics, etc.?

6. If your demands are not met by the existing institutions, kindly state your views as to how these institutions should be re-organized to meet your demands.

7. Kindly state your opinion on the views of Mr. Abbott regarding the standard of education and training that workers of the supervisory grade should receive.

8. If you agree that the standard of education and training to be imparted by Junior Technical Schools and Senior Technical Schools

## INDUSTRIAL PLANNING : WHY AND HOW

as proposed by Mr. Abbott to be satisfactory for recruitment to the supervisory grade in your industrial concern, are you willing to take in annually a number of pupils completing their courses of training successfully in such institutions to fill up your vacancies? If so, kindly state the number (minimum—maximum—average).

9. If your answer to Q. 1 is in the affirmative, do you agree with Mr. Abbott that the solution of the problem of securing the co-operation of industry and commerce with education lies in the establishment by the Department of Education in Bengal of an Advisory Committee for vocational education assisted by a number of Advisory Sub-Committees as suggested by him in paragraphs 38 and 39 of his Report?

10. If you do not agree with Mr. Abbott, kindly give your reasons and also state if you have any alternative proposals to make.

11. Mr. Abbott in paragraphs 43 to 47 of his Report has suggested various methods by which business assists technical education in England and other European countries. Do you think that business in Bengal can and will assist technical education by any of these methods? If you think so, kindly state the nature and extent of assistance that may be forthcoming. If you do think so, kindly state your reasons.

12. Do you agree that Advisory Sub-Committees mentioned in Question 9 should have functions as described in paragraphs 40 and 41 of the Report of Mr. Abbott? If not, what are your suggestions?

13. Do you consider that part-time schools for training young men already engaged in business are necessary? If so, kindly refer to the observations contained in paragraph 65 and paragraphs 164 to 173 of the Report of Mr. Abbott and give your considered views on the various points discussed therein.

## APPENDIX B

### GENERAL QUESTIONNAIRE OF THE NATIONAL PLANNING COMMITTEE.

#### I.—OBJECTIVES AND REQUIREMENTS OF NATIONAL ECONOMIC

##### PLANNING.

1. What do you consider to be an adequate standard of living in your Province? What steps do you consider to be desirable and feasible, (a) by the development of the existing agricultural and industrial resources of the Province, (b) by establishing new industries, (c) by working up to the maximum capacity the existing ones, as well as (d) by improving agricultural production, it may be possible to attain that standard? How would you provide for measuring the degree of growth from time to time in all these lines of development?

2. Would you prescribe any definite time limit within which the above-mentioned degree of development may be attained, if all the factors working in the scheme of a scientifically planned development of the province were properly co-ordinated and functioned as required?

3. How far would it be possible to include in the Plan thus made for an all-round development of the Province, an element of elasticity, so as to enable those who have the conduct and execution of the Plan entrusted to them, to adjust from time to time, any inadequate or excessive development at one point or another, so as to keep to the schedule and make simultaneous advance on all fronts?

4. In defining the requirements of the Plan or prescribing the standard for measuring the achievements of the Plan, what are the heads you regard as important to be emphasised and especially attended to in formulating and carrying out the Plan?

5. How far should the inclusion of adequate ways and means for the prosecution of the Plan on all fronts necessitate co-ordination between (a) all the units constituting modern India, and (b) departments of Government and public activities, so as to co-ordinate the work and intensify the rate of progress simultaneously in all directions?

6. How far is the problem of scientifically planning the development of the country a problem in (a) increasing the aggregate production of goods and services so as to increase the available

## INDUSTRIAL PLANNING : WHY AND HOW

"National Dividend," and (b) in simplifying, rationalising and reconstructing the system of distributing such aggregate of the new wealth produced in the country every year?

7. What are the improvements likely to be needed for the proper development of all services and branches of industry or agriculture to the optimum degree laid down in the Plan?

### II. CENSUS OF PRODUCTION.

8. What are the principal sources of production in your Province in respect of (a) agriculture, (b) animal husbandry, (c) forests, (d) mines, (e) subsidiary or small-scale cottage industries or handicrafts, (f) large-scale power-driven industry and (g) services?

9. Has any census of production ever been taken in all these several respects, and, if so, what is the net per capita income in terms of commodities and services reduced to a common denominator, i.e., money?

10. How far is your Province a deficit or surplus Province, or self-sufficient, in the matter of (a) food supply, (b) what industries there are for which (i) raw materials are available locally or (ii) have to be imported from outside, (c) key industries and essential public utility services, and (d) consumption goods?

11. What are the principal industries conducted by individual workers in their cottages on a small scale? How far are these industries open to and affected by competition and unable to maintain their existence against large-scale industry in the same field? What steps have been taken in your Province to correlate the claims of large-scale as well as small-scale industries—principal or subsidiary? How far have these means been successful?

12. What are the industries concerned with the production of (a) consumption goods, (b) luxury goods, (c) services goods needed for public utility services, now being conducted in your Province? To what extent is there room for further development of any such industry for (a) the local market, (b) the all-Indian market, and (c) for export abroad?

13. Are there any key industries in your Province?

14. How far are 'heavy' industries already in existence in your Province, and to what extent do these industries compete with corresponding industries within the country, or outside the country?

15. What room is there for the further development of these 'heavy' industries in your Province, and what steps would you suggest for achieving that end?

## APPENDIX B

16. How far is your Government taking steps to aid, encourage, foster and protect the existing local industries, and develop new industries, which owing to the available supply of raw materials labour and capital, as well as the necessary experience and knowledge, can be said to have a promising future within a definite period? How far has success attended the activities of Government in this behalf?

### III. RAW MATERIALS NEEDED FOR NATIONAL PLANNING OF INDUSTRIES.

#### (A) *Agriculture.*

17. What are the principal industrial raw materials available in your Province from the cultivation of land, on which new industries can be based or from which existing industries can be further developed?

18. How far are these resources worked up to-day into finished products, and by what agency, whether individual craftsmen, or small-scale organizations, or large-scale joint-stock enterprises working with power-driven machinery?

19. What possibility is there to develop the production of new or additional raw materials, whether available within the province, or imported from the neighbouring provinces or states, or from foreign countries?

#### (B) *Forest Produce.*

20. How far are the products of forests in your Province utilized for the purpose of industrial development, building up new large or small-scale industries, the products of which are in demand in the provincial, national, as well as the world market at the present time? What are the difficulties you have come across for the proper industrial utilization of these Forest Products in regard to Forest Law, Transport and Game Laws?

21. What steps have been adopted to solve these difficulties?

22. What steps, if any, have been taken or are in contemplation to bring about the reforestation of the denuded or deforested regions in your Province to develop forest industries or to afford protection or to attract rainfall?

#### (C) *Mineral.*

23. What are the chief mineral resources available in your Province? How far are these resources already being exploited, and developed, and by what agency?

24. What is the room for large-scale mineral, or metallurgical industries in your Province?

25. What is the policy of Government in your Province in regard to the grant of concession for the exploitation of mineral wealth?

26. Are there any industries for the working up of the mineral raw material found in your Province in the shape of metal sheets and metalware of all kinds?

27. What agencies—local, Indian, or non-Indian—exploit the mineral resources of your Province under what form of organization and on what scale of production?

## IV. OTHER REQUIREMENTS OF INDUSTRIAL DEVELOPMENT.

28. What are the handicaps as regards the proper development of the various kinds of industries in your Province, relating to working up the raw materials into finished products of agriculture, forest, mines, animal resources, and "process" industries in regard to (a) capital, (b) skilled workers, (c) adequate labour supply, (d) marketing and (e) transport?

29. To what extent is capital needed for such industrial development available locally in your Province, or attracted from neighbouring provinces, or supplied from non-Indian sources?

30. What are the institutions concerned in the mobilization, attraction and investment of local or foreign capital? To what extent do these institutions need to be varied, improved or expanded, so as to supply adequately the capital needs of agriculture, industry, commerce and other essential services to secure the optimum development of the Province all round?

31. What measures, if any, have been adopted in your Province to control the supply and regulate the conditions of working of foreign capital invested in the industrial concerns operating in your Province?

32. How far is your Province adequately supplied in respect of skilled workmen, technical experience and general industrial or business enterprise and markets within and outside your Province? What steps are taken for making good the deficit, if any, of such requirements of industrial growth?

33. What policy or line of action has been adopted by you for attracting on suitable terms foreign technicians or experts in regard to particular industries? What conditions and restrictions, if any, would your Government desire to apply in regard to the importation of such foreign technicians, scientists, or experts?

34. What is the experience in your Province of the efficiency of available industrial labour? To what extent do the conditions of work and employment of industrial labour safeguard on the one hand

the worker against undue exploitation, and on the other, the community collectively against inefficiency of labour?

35. How far, in your Province, are (a) the existing equipment in all large-scale industries, and (b) the actual form of the organization and management of such industries, sufficient to guarantee a fair degree of industrial efficiency in output, quality, etc.?

36. What are the industries already in existence in your Province, which enjoy, in one form or another, protection, aid or Provincial encouragement from the Central or Provincial Government in the shape of:

- (a) Protective customs duty,
- (b) Financial aid, e.g. a direct subsidy or bounty, or guarantee of purchase of a minimum quantity of output at fixed prices,
- (c) Cheap transport rates,
- (d) Supply of useful commercial and technical information concerning such industry,
- (e) Furnishing of skilled, technically trained experts to found and maintain such industries?

37. What agencies conduct such large industries in your Provinces—i.e., private enterprise, non-Indian, Indian indigenous to the province or from outside the province, or any public statutory body within the province? How far is the development of industries under any of these agencies affected? How would you secure proper co-ordination of all these various agencies?

38. Are there any industries established in your Province conducted directly by foreign capital, recognized and registered in India as joint-stock companies, or affiliated to a nominally Indian concern, e.g. by adding the words 'India, Ltd.'? What steps would you suggest to prevent this growing menace of 'India, Ltd.' and what remedies do you suggest and what effective steps would you advise us to take that swadeshi industries as defined by the Congress may grow up in your Province?

39. Are there any industrial concerns in your province operating as part of an international combine regulating that industry or as mere offshoots, if not branches, of foreign industrial enterprises? What steps would you adopt to regulate and control the working of such concerns in the best interests of the Province? Would you suggest an all-India legislation on this point, and, if so, on what lines?

40. Do you notice any tendency amongst the large-scale industries in your Province combining with corresponding establishments of the same industry within the Province, or within the country, so as to make a substantial monopoly of the industry in hands of that



combine? What are the consequences in regard to prices to the consumer within the country, labour condition, industrial equipment and technique, in regard to such industries?

#### V. AGRICULTURE INCLUDING ANIMAL HUSBANDRY.

41. How far is agriculture in your province able to supply all the food required for an adequate standard of nourishment for the population in your Province?

42. What are the staple articles of diet—such as food grains, fish, ghee, butter, oil, etc. (a) which go out of your province, and (b) which are brought in from outside into your province? Please give value and quantity.

43. Is there in your province any area of culturable land which is not yet brought under the plough? What steps have been or are contemplated to be taken for bringing such land under cultivation? What agency and organization would you recommend for bringing such land into cultivation, and how would you finance it?

44. What are the handicaps which affect the maximum utilization of the available agricultural wealth and resources of your Province in regard to (a) soil, (b) water-supply, (c) manure, (d) mechanical or animal equipment, (e) finance and credit, (f) marketing, (g) taxation, (h) organization of the agriculturists, and (i) excessive fragmentation of agricultural land and the scattered character of individual holding?

45. How far is it possible, by reorganization of the agricultural population or introduction of some form of compulsory co-operative of collective farming, to remedy the principal handicaps?

46. How far does the yield per unit of area cultivated for different crops within your province compare with the corresponding yield per unit of the same crops in (a) the other provinces of India and (b) in the other countries of the world? What steps would you take to improve the quality as well as the quantity of this yield?

47. To what extent is the animal wealth of the Province an aid to agriculture, and contributes to the general improvement of the food supply of the community and transport? What steps have been adopted for purposes of establishing new industries, or developing existing ones to their fullest capacity in the Province out of the animal wealth of country, e.g., meat, dairy, hides and skins, hair, wool, teeth, tissues, etc.? What measures have been adopted to maintain and increase these sources derived from the animal wealth?

48. Are there any "process" industries in your Province, and what room is there for the increase or further development of such industries?

49. What are the principal risks to which agricultural production in your Province is exposed, e.g., from the shortage of rains or inadequate water-supply? What measures have been adopted in the Province for insuring against such risk?

50. In what direction is it necessary to extend in your Province the principle of agricultural insurance to guarantee the agriculturist against the main risks of his occupation, e.g., shortage of rains, failure of crops, of fodder, pests, weeds and floods, diseases amongst plants and cattle, etc.? What policy would you adopt to achieve any effective system of agricultural insurance throughout the Province, as a unit by itself, or in collaboration with the rest of the country, applying to all forms of agricultural wealth, e.g., crops, animals, food and water, etc.?

51. How far is the general level of (a) the health, (b) sanitation, (c) education and cultural growth of the countryside, affected by the *adequacy of agriculture and associated subsidiary industries in your Province*? What are the steps already adopted or in contemplation for raising the standard of living among the agriculturists in regard to any of the subjects mentioned above? Would you suggest any definite degree to which the standard may be raised?

52. Prevention by legislation of fragmentation and division of agricultural holdings below an economic size. Whenever such division becomes necessary as a result of the rights of inheritance under law, can the difficulty be got over—

- (a) by the entire management of land being vested in an agency recognized by Government which, after paying itself minimum management charges, would divide the proceeds amongst co-owners, or
- (b) by compelling the inheritors to sell out their respective portions to one of their members at a reasonable compensation—the loan in such a case being made available to the buyer through a co-operative society, or
- (c) by complete abolition of the existing land revenue system and purchase on hire purchase system over a period of 30 years or so by the cultivator, or
- (d) by legislation on the lines of the Irish Land Bill, which would make it possible for the actual cultivator to purchase the land from the owner by getting its value assessed

## INDUSTRIAL PLANNING : WHY AND HOW

through a Government Court—Government paying out the owner in provincial interminable loan bearing interest at a certain per cent and Government recovering the amount as suggested above on hire purchase system ?

53. Are there any considerable classes of population in the Province concerned with agriculture, and yet not having direct rights upon land ? What is the standard of living they can obtain and how can the same be improved to a stated degree, assured as the minimum needed for civilized existence to every citizen within the Province ?

54. In what way is the status of the landless agricultural labourer in the Province protected or safeguarded by the Provincial Government, local bodies, or any other institutions concerned therewith ?

55. To what extent has your Province experienced the transfer of agricultural land from classes actively and hereditarily connected with agriculture to those who are not principally agriculturists by heredity or temperament, and who, therefore, constitute so many parasites upon land, concerned only with receipt of their rent or revenue from land worked by those who originally owned the land ? What steps have been taken or are contemplated to prevent or minimise such a state of affairs ?

56. Is there any class of population in your Province which derives its living merely from the right of ownership in agricultural land without any active concern with cultivation of such land ? How does the share of the aggregate provincial wealth obtained by this class compare with the corresponding share obtained by those who actually cultivate the land as tenants, or hired labourers who have no other rights in land ?

57. What steps have been taken or are in contemplation for the organisation of

(a) agricultural labourers who have no land of their own, nor any sort of ownership rights in land,

(b) of tenants of agricultural land owned by zamindars, taluqudars or other such categories of landlords,

with a view to secure a more equitable distribution of the annual wealth produced from agriculture, and to assure a guaranteed minimum standard of living for every citizen in the Province ?

58. What is the incidence of taxation upon land or the agricultural wealth produced every year from land, open or concealed, public or private, by way of rent or revenue in your Province ? What is the reaction of such burden upon the agriculturist class in general ?

## APPENDIX B

### VI. INDUSTRIES SUBSIDIARY TO AGRICULTURE.

59. What are the principal industries which may be regarded as subsidiary or incidental to agriculture now being conducted in your Province? How and by whom are they conducted, and what is the result as regards the income of the community from this source?

60. What room is there in your Province for the increase or expansion of such industries subsidiary to the main industry of agriculture? How would the Provincial Government aim to develop such new industries?

61. To what extent would it be possible to adjust the working of such subsidiary industries to the convenience of agriculturists as a whole in respect of the seasons of work, the necessary raw materials, transport and market for the disposal of the produce?

62. What by-products of agriculture, forestry or mining or industry need to be utilised for the further all round industrial development of your Province? What are the handicaps for the fullest utilisation of such by-products?

63. What off-season, part-time occupations of a productive nature, and workable on a scale within the means of an average agriculturist's family in your Province, are available in your part of the country? How would you suggest they be further developed to reach the highest possible level of efficiency and productivity?

64. Is there any industry, large or small, in your Province which deals with fruit cultivation on a commercial scale? How far is canning of fruits, vegetables, or the production out of such articles of ready-made food-stuffs, e.g., jelly, pickles, preserves, jam, soups, or dried fruits, conducted as a large-scale industry?

65. To what extent is horticulture and market gardening developed as a special industry in your Province? What is the market in your Province for (a) flower essences and scents, (b) vegetable oils, (c) toilet articles made, flavoured or scented from the same? How far is it possible to develop this industry on a large scale for the local market and for export beyond the Province?

### VII. MARKETING AND COMMERCE.

66. What are the facilities for marketing all the available produce in your Province—agricultural, industrial, forest or mineral?—Within as well as outside the Province?

67. What is the market for the products of cottage industries, small-scale industries, and large-scale mechanised modern industry in your Province? What room is there for the development of the existing local market for the consumption of the raw materials, as

## INDUSTRIAL PLANNING: WHY AND HOW

well as for that of the finished products made from the raw materials?

68. What are the impediments in the way of a smooth and rapid marketing of local products in your province, with special reference to

- (a) proper grading and certification of quality,
- (b) adequate storing of quantity,
- (c) financing of the produce awaiting sale,
- (d) transport facilities for taking produce of all sorts from the place of production to a central market, where storing and grading may be feasible, and all incidental services readily available?

69. How far is the existing middleman participating in the processes just named likely to cause an excessive burden upon the primary producer, as well as on the consumer?

70. What steps, if any, are adopted in your Province to avoid or minimise the burden thus imposed by the middleman upon the producer and consumer?

71. What rule would you devise for the organization and proper distribution throughout the province of middlemen, so as to fit in with the main scheme of the planned development, and to minimise the number of middlemen, the frequency of their intervention in the process of the transfer of goods and services from the producer to the consumer and the consequent burden imposed by them upon the producer and the consumer?

72. How far is it possible for Government to help to organise the system of marketing or exchange of all commodities within the Province, and remove the impediments in the way of most effective and economical marketing, so as to secure the maximum proportion of the price obtained from the eventual consumer for the benefit of the primary producer?

73. To what extent have measures been adopted, if at all, for the systematic control and regulation in public interest of the whole volume of internal trade in the Province?

74. How far is it possible within your Province to regulate the prices of all necessities of life produced or sold in the Province in such a manner as to assure a pre-determined degree of a profit margin to the primary producer? Do you consider it desirable to have such a policy?

75. To what extent is the reservation, provided for in the Constitution of 1935, of all powers and functions in regard to the control and regulation of credit, currency, and therefore also of prices within the country, a factor militating against the success of any scheme of

internal fixation or control and regulation of prices within the Province by the Provincial Government?

76. In the absence of any control of the currency and credit system of the country by responsible Provincial Governments, how far would it be possible for Provincial Governments to introduce a system of internal barter, so as to reduce the importance of the cash nexus in the settlement of any trading transaction in the Province, and thereby avoid the influence of outside factors affecting the general price level?

77. How far would the existence of free competitive trade—so far at least as foreign trade is concerned—frustrate any attempt at all round price control within the province?

78. How far is the collective organisation of the village population, or of other primary producers and consumers into compact units, a practical proposition in your Province, and to what extent would it help to achieve minimising the intervention of the middlemen, and, consequently, of the toll levied by such middlemen, on the producers as well as consumers in the determination of the price-level within the Province?

79. What is the extent of the aggregate trade of your Province with (a) other provinces and states in India, (b) countries outside India?

80. What are the principal articles of imports and exports, classifying them as (i) food-stuffs, (ii) industrial raw materials, (iii) finished or semi-finished products of industry, (iv) mechanical or other equipments for industry, (v) materials for the conduct, organization and supply of all accessory articles for such services as transport, public health or education?

81. To what extent are the articles of agriculture, as well as products of industries, at present imported into the Province, possible to be made, or are actually produced, within the Province, or which cannot be produced at all on a competitive commercial basis within itself?

82. Is there any produce of your Province which can be regarded as its exclusive or partial monopoly? How far is such produce at present disposed of to the ultimate consumer? To what extent is such produce worked up into finished products ready for consumption, within the Province, or within the country? Or, in the alternative, to what extent is the produce exported abroad?

83. What are the directions in which a wider development of the international or inter-provincial trade of your Province, both as regards exports and imports, can be effected?

## INDUSTRIAL PLANNING : WHY AND HOW

84. To what extent and in what manner would you suggest a close control and regulation of the trade of your Province described in the preceding question ?

85. What are the handicaps or impediments in the way of a proper development of the internal trade in the Province, of its inter-provincial trade and of its foreign trade in respect of

- (a) financing,
- (b) transport,
- (c) relative stability of the price level, and
- (d) a proper marketing organisation ?

In what way are these handicaps capable of being removed or remedied ?

86. How far is it possible to fit in the requirements of the trade and commerce of your province, both within the Province itself and outside it, with the general scheme of Planning for the collective economy of the nation considered in the aggregate ?

87. To what extent would the regulation of the foreign and overseas trade of India by such means as specified trade treaties with our principal customers in the world benefit your Province ?

88. How would a system of imperial preference affect the economic condition and the local, Indian and foreign trade of your Province ?

89. What are the principal agencies conducting the foreign trade of your Province ? What methods of regulating the trade do you suggest ?

90. In what way would the trade of your Province—local, Indian and foreign—be affected by a modification of the principle of private enterprise in all branches of production and consumption of goods and services ?

### VIII. TRANSPORT FACILITIES.

91. What are the various available transport facilities within your Province which are

- (a) within the control of the Provincial Government,
- (b) outside the control of the Provincial Government,
- (c) within the control of local bodies within the Province ?

92. How far are these existing means adequate for all the movement of men and goods in the Province ?

93. What is the extent of road mileage in respect of main trunk roads, provincial roads, and local by-ways in your Province ? Has there been prepared any programme for increasing this mileage, and

## APPENDIX B

distributing throughout the Province that mileage in such a manner as to provide an efficient supply of road service?

94. What are the handicaps in the way of increasing the road service within the Province, and how does the Government of your Province contemplate, if at all, to remove such handicaps?

95. To what extent is your Province interested in water transport by river, coastwise, or overseas shipping, including building as well as operating ships?

96. What are the facilities for an efficient water transport service in your Province? How far are they developed? What room is there for their further development?

97. How far is it possible to develop and increase these facilities by means of maintaining adequate channels in the existing rivers, or making navigation canals from the rivers so as to interlink the river system, or providing the necessary port and terminal facilities at central points on the rivers, and other such devices suited for the adequate development of cheap and efficient inland water transport within the Province?

98. What is the extent of railway mileage of all gauges in your Province? Are there any supplementary tramways or light railways? How do the rates charged on the goods moved within the Province affect the development of industry as well as market?

99. Are there any Railway workshops or plant making establishments in your Province? To what extent do they provide employment to local labour, capital, skill and experience?

100. Have you had any occasion to make any representation on behalf of the Provincial or any commercial or industrial organisation within the Province in regard to

(a) policy and incidence of railway rates,

(b) employment of railway labour,

(c) development of outlying regions by means of cheap transport facilities. How far is there room for fostering such facilities?

101. What is the cost of transport, by road, rail or water, on these various means or forms of transport in the Province as compared to one another? How has the cost of transport affected the development of industries?

102. What means, agents, or organisations are there for controlling, in the public interest, the cost of transport or the rates, freights and fares charged by the various agencies for the transport of passengers and goods? How should these be developed if they are lacking at present?



103. What machinery would you provide to regulate as well as to secure speedy and effective settlement of disputes in regard to rates, freights and fares or charges for the transport service, its efficiency and safety?

104. Are there any industries in the Province in relation to any of the means of transport, in the shape of the production and supply of vehicles or their parts and accessories, including repairs or of roads and bridges, including the material for the construction and maintenance of roads, water-ways, rail-roads, tramways, ships and air-way transport? Are any ships built in your Province? If so, give a clear idea as to the nature of the ships built and the extent of this building operation.

105. What are the raw materials and other facilities, e.g., draught animals, available within the Province to provide a basis for the establishment therein of any industry connected with transport as described in the previous question, such as the production and supply of automobiles, ships, air-planes, rail-road wagons and locomotives, carts and wheels, and other parts and accessories for the same?

106. What are the handicaps in the way of establishing

- (a) a ship-building industry in India sufficient to do all the water transport of goods or passengers on the rivers, along the coasts of India, or in regard to overseas intercourse;
- (b) a locomotive and railway rolling stock making industry, and to supply a Navy for India;
- (c) automobile making industry, including all its parts, engines, accessories, as well as prompt and effective repair of the same;
- (d) making and supply of aviation planes, airships, their parts, engines and accessories?

What steps would you suggest for developing an Indian ship-building industry both for commercial and for defence purposes?

107. What scope is there for developing adequate industries for the manufacture and supply of fuel or motive power for the various means of transport within your Province?

108. What facilities are available for repairing and "servicing" or supplying of parts and accessories of transport within your province? How far is it possible to develop these facilities so as to make the entire business of transport safe, adequate, economical, and efficient in working as a properly co-ordinated, rationalised, and modernised service for the entire Province?

109. To what extent would the Province be prepared to help to organise or participate in an all-India enterprise, which would supply

the materials, parts, accessories, or complete vehicles for the organization of the entire road, water and air transport as an industry as well as a service?

110. What are the industries dealing with production of the means of communications already available in your Province in regard to posts, telegraphs, telephones, radio and the like? To what extent is the manufacture and supply of the instruments, apparatus and accessories as well as their repairs necessary for these means of communications possible to establish and maintain within the Province, or by means of a national central workshop for the manufacture and supply of all such instruments and apparatus? How far and in what way would your Province be able to contribute for starting and working such an enterprise if one were decided upon?

111. To what extent have the Government of your Province associated themselves with any private enterprise in the interest of the general public, and for developing the industrial resources of the province including forests as well as mining, by means of cheap and efficient transport?

112. How far do the rivers in your Province, if any, give rise to problems of floods, erosion of banks, silting and shifting of the river-bed from time to time? What steps have been taken by the Government of your Province hitherto, and what new steps are contemplated for solving any of these?

113. How far is it possible by Government enterprise to develop, organise, and co-ordinate all forms of transport, with a view to the most economical and efficient organisation and working of that service within the Province?

114. What are the agencies which to-day operate or are in any way concerned with the various forms of transport within your Province? How far is it possible to co-ordinate these various agencies into a collective or State-controlled enterprise so as to provide the most economical, efficient and co-ordinated service for the transport of goods and passengers?

115. (a) Are there any shipping companies owned, controlled and managed by Indians, plying their ships either in the rivers within your Province, or on the coasts of your Province, or in the overseas trade carried on between your Province and other countries?

(b) Do you consider the present share of the trade on the rivers, coast, or overseas catered for or obtained by the above companies sufficient from the view-point of the economic life of the Province, as well as from the economic and defence necessities of this country? If not, what are the difficulties that such Indian enterprise

has to meet with in securing their proper share of the trade? What steps do you propose so that these difficulties may be overcome and an adequate Indian merchant marine built up for India?

## IX. CONDITIONS AND FIELD FOR EMPLOYMENT.

116. To what extent would it be possible to widen the field of employment in the process of developing the Province as indicated above, in regard to establishing or developing new industries, improving agriculture, exploiting forest resources, developing transport services, marketing finished products, and the development of all other accessories, such as banking, insurance, transport, health, education and the general welfare of the community?

117. What are the average rates of wages or income in the Province for (a) wage earners employed in industrial, commercial or transport services, (b) agriculturists with or without any land of their own, (c) tenants of agricultural land holding larger land owners, and (d) those employed in private administrative or public services such as Public Education, Public Health, Communications etc.?

118. Have any measures been adopted by your Provincial Government regulating the terms, conditions and hours of work of the working population, and providing amenities of civilised life and safeguards against the risks of working life like insurance against industrial accidents, old age pensions, unemployment benefits, apprenticeship, etc.? What further measures do you suggest should be adopted in the same direction?

119. To what extent is industrial labour organised in your Province and how far have such organisations succeeded in improving the conditions of such labour in general? How far have such organisations been recognized for making effective bargaining with workers and maintaining industrial peace and harmony?

120. To what extent do industrial disputes result in your Province in the loss of working days and of new wealth in consequence? What machinery is there to prevent such disputes or to minimise the loss and damage to the workers as well as to the wealth of the Province resulting from such disputes? How far is it possible in the interests of Planned Economy to insist on a system of compulsory arbitration enforceable on both parties by means of appropriate sanctions?

121. To what extent is it possible effectively to organise agricultural labour not directly owning or holding land of their own, but working for a wage on the land owned or held by another or work for another?

122. To what extent would it be possible to bring about a transfer of the working population from the primary occupations of agriculture or its subsidiary industries to (a) new or developed industries of all

kinds on cottage, medium or large-scale operations; (b) commerce and its accessories like transport, banking etc., so as to lead to a more planned economy?

123. What should be the standard of living you consider to be adequate for the proper maintenance of bodily and mental efficiency of the general mass of population, including workers as well as dependants, and their cultural growth in your Province? What steps ought to be adopted for improving that level?

124. To what extent is unemployment prevalent in your Province in regard to (a) educated classes, (b) uneducated classes in towns, (c) agricultural population which has no land of their own?

125. What are the causes of such unemployment with special reference to the (a) organization of industry and agriculture, and (b) education and training of these classes? What attempts have been made to remedy the same?

126. What organisation is there for the prompt and effective finding of employment for those needing and qualified for it?

127. What steps have been taken by the Provincial Government to relieve the volume of unemployment, and, if so, what is the measure of success which has attended those steps?

128. Is there any scheme of unemployment relief or insurance in your Province? If not, would you suggest organizing such a system of relief?

129. To what extent is any process of annual or seasonal migration into or from your Province now prevailing? What measures have been adopted to regulate such migration and what is the result of such regulation or control? Consider the ways and means for the development and consolidation of economic and trading relations with adjacent countries to their mutual benefit.

130. Is there any organisation or machinery in your Province which will act as Labour Exchange serving to record the employment needs and qualifications of workers as also of employers and adjusting the mutual requirements of workers and employers so as to minimise the volume of current unemployment at any time? Would you make it a public institution or allow organizations of labour like Trade Unions to start their own Exchanges, with or without official recognition and support?

#### X. TECHNICAL AND VOCATIONAL EDUCATION.

131. To what extent are facilities already available in your Province for proper education or vocational training in the various

branches of agriculture, forestry, mining, industry, and all forms of business including banking, insurance, transport, marketing etc.? In what direction is it possible to improve the existing facilities in this which would be necessary for the proper execution of a planned programme of Provincial and National Development?

132. What new or further development in other forms of education—general, commercial or professional—would also be necessary so as to keep pace with the programme of planned development of the Province and of the country?

133. How far is it feasible, and, if so, to what extent would your Province be prepared to make its contribution to establish a Central Technological or Polytechnical Institute where (a) all the varieties of specialised skill, training and experience in practical work in the different branches of agriculture, forestry, industry, mining and commerce may be provided, and (b) which would serve as a sort of a Central Labour Exchange for technicians of the highest order in every department?

## XI. FINANCE.

134. What are the means now available in your Province for the financing of (i) existing industries, whether large-scale or small-scale, (ii) new industries of a mechanized, large-scale nature, (iii) new industries likely to be carried on by small-scale workers in their own cottages, (iv) assembly and repairing work in regard to such matters as automobiles, radio instruments, gramophones, electric light and power apparatus etc., (v) improvement, development, and removal of the handicaps in agriculture, (vi) exploitation of forest and mineral resources, (vii) improving and organising transport and communication services, (viii) providing public utility services like education, sanitation, insurance, marketing etc.?

135. What are the possibilities of attracting investment capital from (a) other provinces, and (b) other countries, to and in the process of carrying out the programme of Planned Economy as applied to your Province? On what terms and conditions would you consider the attraction of such outside capital for such a purpose?

136. What are the banking facilities available in your Province? To what extent would it be necessary to improve industrial and agricultural financing now done in your Province and the credit of industrial workers in general?

## APPENDIX B

137. How far have the following institutions succeeded in mobilising the capital resources of your Province: (a) Co-operative Societies; (b) Post Office Savings Bank; (c) Postal Cash Certificates; (d) Savings Department of ordinary banks?

138. How far is it possible for the Provincial Government directly by themselves to finance the establishment of new industries in regard to fixed as well as working capital, or in association with private enterprises?

139. In the event of the Provincial Government or any local body working in partnership with private enterprise in any provincial industry, utility or service, what should be the terms and conditions of such partnership especially in regard to (a) general supervision over the conduct and management of the concern, (b) treatment of labour, (c) interests of consumers, (d) provision of reserves, (e) sharing of profits and (f) eventual acquisition of the entire enterprise by Government?

## XII. SOURCES OF FUEL, POWER & ENERGY.

140. What are the sources of power supply in your Province, apart from human labour, in respect of (a) animal power, (b) mechanical power, and (c) electric energy? How far have they been adequately developed?

141. In what direction is it possible to develop these sources so as to distribute additional power supply with a view to making it available in the cheapest possible way?

142. Are there any mines in your Province for the production of coal, petroleum, or natural gas? To what extent are these sources of power supply worked in your Province, and by what agency? What is the nature of Governmental control over these agencies for the proper development and economical working of these sources of power supply?

143. Is there any other source or material (molasses, prickly pear, etc.) from which new power may be obtained on a considerable scale? How far are such sources already investigated? What steps would you suggest for developing these sources of additional power in your Province?

144. What facilities have been provided for the development of technical research in regard to the most economical and efficient use of the available fuel supply and other sources of energy?

145. What facilities have been provided in your Province to encourage technical industrial research, so as to make the conduct of

## INDUSTRIAL PLANNING: WHY AND HOW

agriculture, industry and all forms of business the most economical and efficient as well as progressive?

### XIII. INDUSTRIAL AND COMMERCIAL STATISTICS.

146. What are the means available in your Province for the collection, compilation and publication of any economic information relating to industries, agriculture, commerce, transport, banking, etc. (concerning the Province of your own)?

147. How far are the statistical materials, reports and bulletins published by the Central Government relating to your Province accurate and up-to-date as well as of direct interest and service to active industrialists, agriculturists and businessmen?

148. Are there any organizations of trade, commerce, industry or labour as well as of agricultural interests, which collect, compile and discriminate statistics and information relating to these respective interests? What steps do you suggest to improve, develop and popularize such information?

149. What material or facilities are available within the Province relating to technological information concerning new discoveries, patents or inventions which relate to industrial processes, business organization, agricultural methods and improvements and the like? What means do you suggest to make such information widely popular?

150. What steps are necessary to co-ordinate the information mentioned in the preceding question relating to your Province, and the corresponding information affecting the whole of the country?

151. How far are facilities available in your Province in respect of an efficient press as well as publication and propaganda service? To what extent has experience shown it to be necessary to develop these services still further to make the country self-supporting in this regard?

### XIV. ADMINISTRATION.

152. What administrative organization has been set up in your Province to control, regulate, supervise, or foster and promote industrial and commercial activities and the general economic life within the Province?

153. What steps should be adopted to establish an all-India Industrial or Economic Council for the promotion of control, supervision, and regulation of all-India industries, and the economic relations as between the States and Provinces arising out of the programme of planned development so as to maintain a uniform pace of even progress simultaneously on all fronts, avoid friction, and make the working of

## APPENDIX B

the planned programme of local as well as national development effective?

154. What should be the constitution and functions of such an all-India Council of Economic Development—whether purely advisory or partially executive? How far and in what way could such an institution be made responsible to safeguard the co-operation between States and Provinces and the various classes and interests within?

155. What are the means now adopted in your Province to secure an adequate and constant co-operation between your Province and the neighbouring States and Provinces in regard to economic and social development affecting them?

156. To what extent is there a real or imaginary conflict of interest between the industrialized and agricultural provinces of India, between provinces with finance, capital and enterprise and those with raw materials of industry or mineral resources awaiting development?

### XV. INTER-PROVINCIAL ECONOMIC RELATIONS.

157. What are the industries, and other forms of production of new wealth in your Province which compete with (a) corresponding industries and other forms of producing new wealth in other provinces in India, and (b) similar industries in other countries?

158. Have any steps been taken for the provincial regulation and control of such competition with a view to its being avoided?

159. What are the ways in which any unfair, undesirable, or uneconomical competition between provinces in the production of the same forms of material wealth seeking consumption in mutual markets can be avoided?

160. In the development of new industries common to the whole country, what share has your Province taken so far, and what further share does it contemplate to take in the development of new industries on an all-India basis with a view to avoiding the mutual jealousy between the provinces?

161. To what extent is it desirable to frame a programme of industrial development in the country by establishing important industries (a) in different regions as far as possible according to the available facilities in the shape of raw materials, labour supply, capital or any other similar pre-requisite for a successful development of the industries, or (b) planned on the basis of all-India and located and operated from some common centre?



XVI. MISCELLANEOUS.

162. What measures have been adopted for securing a guaranteed standard of quality in industrial and agricultural products within the Province as well as of the process and raw materials required in the prosecution of a planned programme of national development ?

163. How far is it advisable to depend upon imported raw materials for the development of industries within the country for which there is a considerable local market, and which are necessary to the very existence of the nation ?

164. What would be the agency and the general policy under which you would recommend the establishment and development of industries relating to national defence, including provision for munitions and armaments of all kinds for the use of the various defence services ?

165. What are the old and indigenous cottage industries of your Province ? Which of them have been abandoned and why ? What measures do you suggest should be taken to protect existing ones and revive those that were abandoned ?

166. What kind of articles are imported into the villages of your Province ? Is it possible to manufacture them locally or in the surrounding districts ?

167. What are the raw materials available for starting new cottage industries ? In what directions do you suggest steps should be taken to foster new cottage industries ?

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